Artistry in Sound

ONKYO

TX-SV909PRO

Audio Video Control Tuner Amplifier

Instruction Manual

• Congratulations on your purchase of the ONKYO TX-SV909PRO Audio Video Control Tuner-Amplifier. • Please read this manual thoroughly before making connections and turning power on. • Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new TX-SV909PRO. • Please retain this manual for future reference.

CONTENTS

CAUTION:

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

- The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

- For models having power cords with a polarized plug.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- Sur les modèles dont la fiche est polarisée.

ATTENTION: POUR PRÉVENIR LES CHOCS ÉLECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉES À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Important safeguards

1. **Read instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow instructions** – All operating and use instructions should be followed.
5. **Water and moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. **Carts and stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

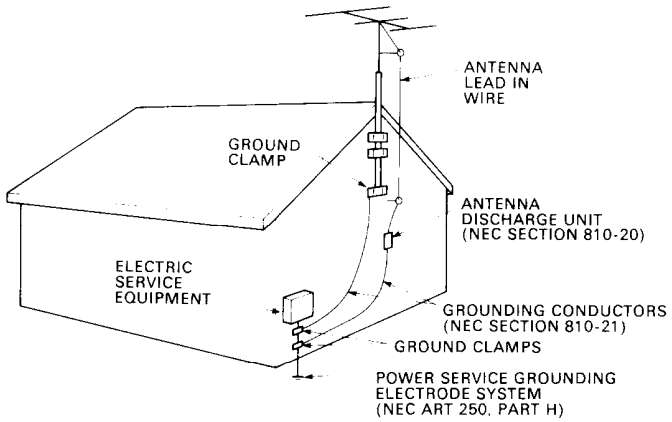
6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING

S3125A

7. **Wall or ceiling mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Polarization** – If the appliance is provided a polarized plug having on blade wider than the other, please read the following information; The polarization of the plug is a safety feature. The polarized plug will only fit the outlet one way. If the plug does not fit fully into the outlet, try reversing it. If there is still trouble, the user should seek the services of a qualified electrician. Under no circumstances should the user attempt to defeat the polarization of the plug.
12. **Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power lines** – An outdoor antenna should be located away from power lines.
15. **Nonuse periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
16. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
17. **Damage requiring service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
18. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
19. **Outdoor antenna grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of the antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 73.1.

FIGURE 73.1:
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE



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Precautions

1. Warranty card

The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.

2. Recording copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

3. AC fuse

The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your ONKYO service center.

4. Care

From time to time you should wipe off the front and rear panels and the cabinet with soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Features

- **7-Channel Output**
  Unlike many other surround -amps, your TX-SV909PRO has entirely discrete output channels for left/right main speakers, left/right front enhancement speakers (and/or left/right extension speakers for another room), center speaker, and left/right rear speakers.
- **The Receiver with Fully Digital Dolby Pro Logic Surround System**
  Not only can you now enjoy the stunning realism of high -class theater sound in your home, you can enjoy it with high precision, thanks to ONKYO's exclusive all-digital Dolby Pro Logic Surround System.
- **8 Surround Modes**
  In addition to Dolby Pro Logic Surround Sound, your TX-SV909PRO gives you an array of DSP (Digital Signal Processing) sound settings: THEATER-1, 2, HALL-1, 2, LIVE CONCERT, and STUDIO. Plus, for the serious autiophile, it offers 4-channel Ambisionic Surround sound.
- **Multiple Room Remote System and Multi Source Selector**
  If you have an additional pair of speakers in another room, you can operate your TX-SV909PRO from the other room (with the optional HR-10/W remote sensor), as well as control non-ONKYO video components, such as your TV or VCR, from another room (with optional HE-50AC emitter and HE-10 emitter head). You can also play different sources simultaneously for multiple room entertainment.
- **6 Video Inputs (6 S-video & 6 Conventional) and 6 Audio Inputs (all gold-plated, except S-video inputs)** to satisfy all your present and future AV needs.
- **On-Screen Display** when you connect your TX-SV909PRO to your TV set, to further enhance your listening enjoyment and give you unmatched operaiton ease.
- **Random Preset Tuning with 40-Station Memory**
- **Separate Front & Center Tone Controls**
- **RI Compatible, 130-Function Programmable Remote Control Included**
  The RI mark is ONKYO's own mark. Audio equipment with this mark can be controlled through the system, using remote control.

Explanation

Surround System

Many motion pictures produced in the last decade have been released in "Dolby Stereo" sound, with music, dialogue, and panned effects coming from the 3-channel front soundstage, and surround effects and ambience emmanating from the sides and rear of the theatre. These four channels are encoded, or matrixed, into a two-channel Dolby Stereo release, and decoded in the theater by a professional DOLBY STEREO MP (Motion Picture) decoder. These surround sound effects are "hidden' in the two-channel stereo movie release, and decoded in the theater by special Dolby equipment.
These same two-channel motion picture masters are used for production of stereo VHS, VHS-Hi-Fi, Beta Hi-Fi, and stereo Laser Vision discs that you can buy or rent at your video store. The TX-SV909PRO incorporates the Digital Dolby Pro Logic Surround Circuit, which is designed to emulate the audience experience found in DOLBY STEREO theaters. Like Dolby Surround, Dolby Pro Logic Surround is capable of creating a multi-dimensional soundstage, but with the increased channel separation it gives a far greater sense of "movement" and sound localization. Just like in the theater, the addition of the active center channel ensures that all audience members hear dialogue coming from its on-screen sources regardless of seating position.

Ambience Simulation

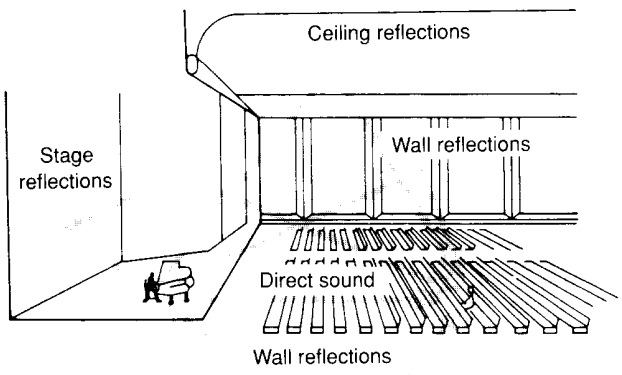
The sound heard at a live performance differs according to the listening hall, due to the sound reflections and reverberations. While these are important parts of the performance, they are not included in very many recordings.Ambience simulation adds these effects to recordings from which they are absent to provide an impression nearer that received when actually attending a live performance.

DSP (Digital Signal Processor)

The DSP converts the musical signal into digital form and produces reflected sound from the digital signal. This is applied to the musical signal to yield an effect approaching that of a live performance.

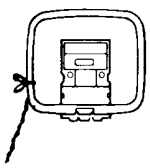
NOTE:

The concert hall effect is produced from the reflections and reverberations contained in the original recording. These are converted into reflected sound that is reproduced from four directions. Thus, in some cases an unnatural impression can be conveyed if there are too few reflections and reverberations in the recording or if the effects in the original recording were produced artificially.

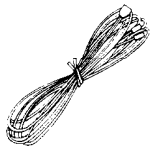


Before using this unit

1. Supplied accessories

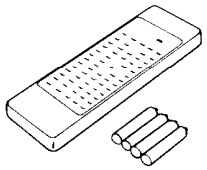


AM loop antenna x 1



T-shaped FM antenna x 1

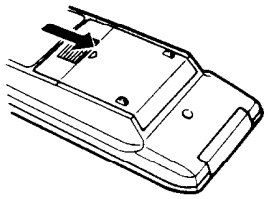
RI remote control cable x 1



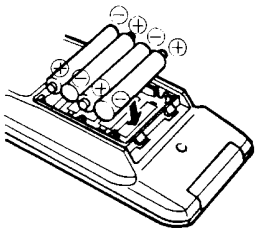
Remote control transmitter x 1
Batteries x 4

2. Transmitter battery insertion

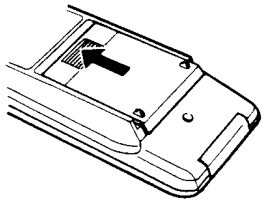
1.



2.



3.



Loading the batteries

Remove the battery compartment cover by opening it as shown in the figure. Load four AA (R6) size batteries with the plus (+) and minus (–) terminals positioned as indicated by the diagram inside the battery compartment and close the cover.

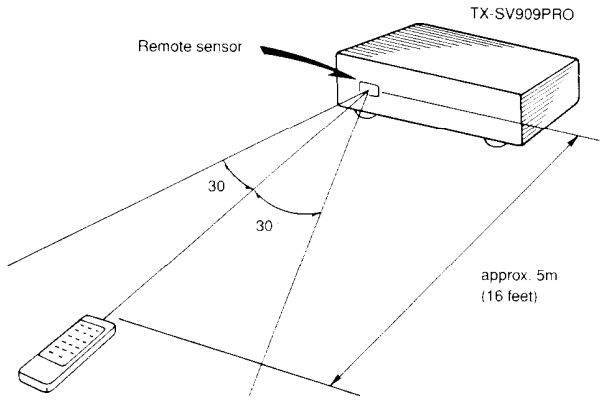
1. In case the batteries lose their power, all indicators will flash when any button is pressed.
2. Remove dead batteries immediately to avoid corrosion damage.
3. To avoid corrosion damage, never mix old batteries with new ones.
4. Learned codes are not lost even when the batteries are replaced. They may be lost, however, if battery replacement is not completed within an hour. In this case, the unit must learn the codes again.

NOTES:

- The manganese batteries supplied with the remote control transmitter RC-230M are for checking the unit, and although the normal lifespan of these batteries is six months, it might be shorter, depending on the frequency of usage.
- The TX-SV909PRO comes equipped with AA (R6) manganese batteries, but we recommend that long-life alkaline batteries AA (LR6) be used when replacing the batteries.

Precautions

1. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of the TX-SV909PRO is exposed to bright light. To prevent this from occurring, place the TX-SV909PRO so that it is not directly exposed to a bright light.
2. If the TX-SV909PRO is placed inside an audio rack behind a glass door, the door should not use colored glass or have any decorations on it since this could shorten the range or prevent commands from being received.
3. Use of other infrared remote control devices in the same room may cause interference.
4. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must always be pointed at the reception window when a command is sent to the TX-SV909PRO.
5. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your ONKYO service center.



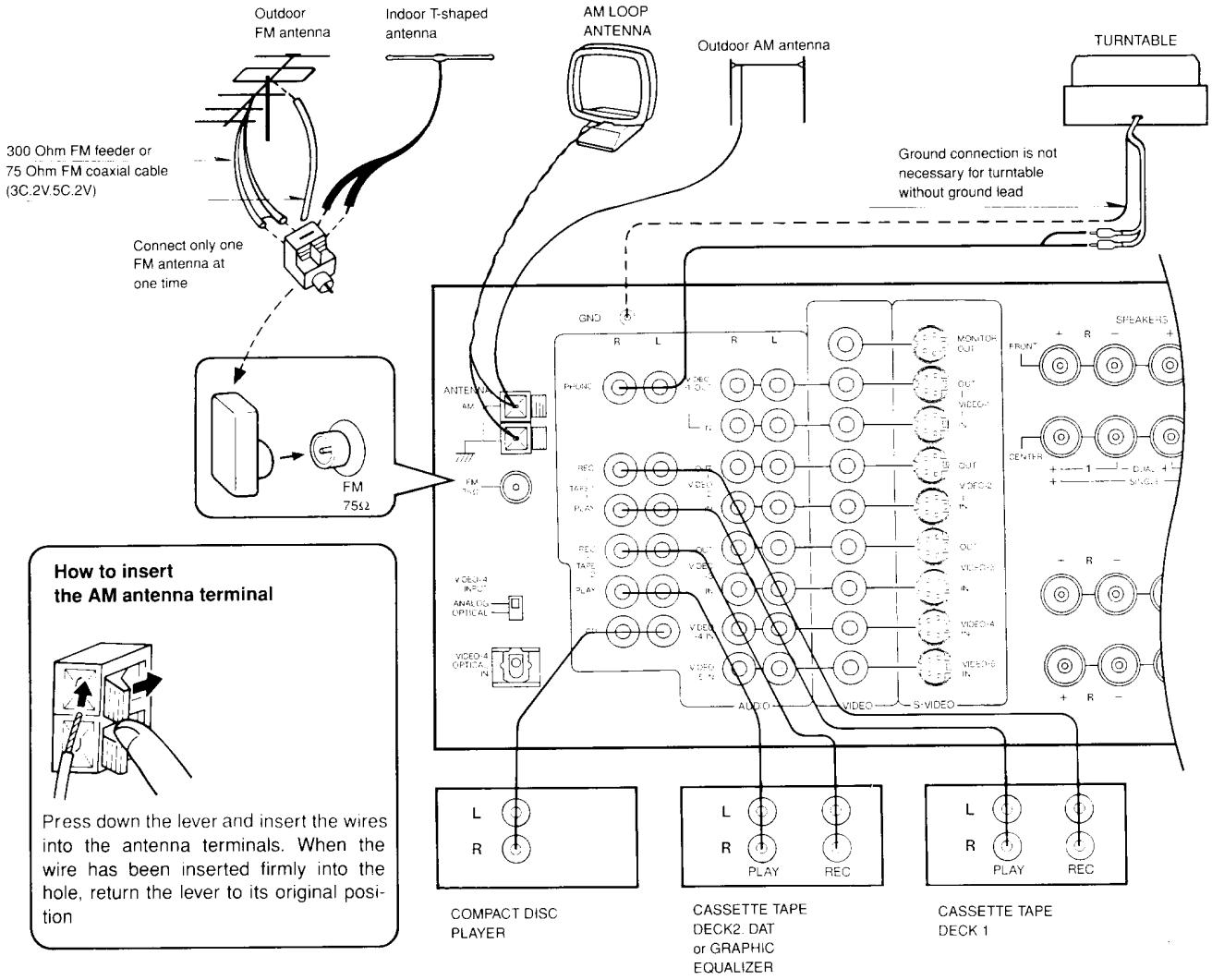
Remote control transmitter
RC-230M

System connections

Do not plug in the cord until all connections have been made.

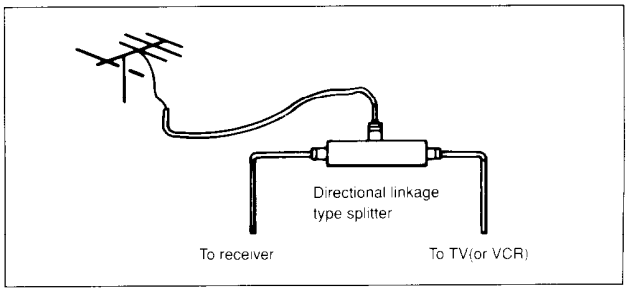
General

Also be sure to perform left and right channel connections properly. When jacks on other equipment or connection cables are color coded, the color red usually corresponds to the right channel. (Red = Right)



FM antenna connections

Depending on the strength and quality of FM signals in your area, the accessory T-shaped antenna may give satisfactory reception or you may need an external FM antenna. To use the T-shaped antenna, spread the antenna on a wall, preferably outside or on the ceiling, and try several positions to determine which gives the best reception. If reception with the T-shaped antenna is unsatisfactory, install a multi-element external FM antenna. Consult your ONKYO Service Center about the right type for your area.



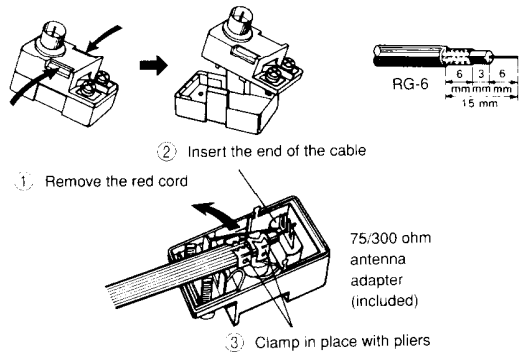
NOTES:

1. Do not use the same antenna for both FM and TV (or VCR) reception since the FM and TV (or VCR) signals can interfere with each other. If you must use a common FM/TV (or VCR) antenna, use a directional linkage type splitter.
2. Follow the directions below to connect an antenna adapter to a 75 ohm cable.
3. Do not connect both the indoor T-shaped antenna and an outdoor FM antenna. If you decide to install an outdoor antenna, be sure to disconnect the indoor T-shaped antenna.

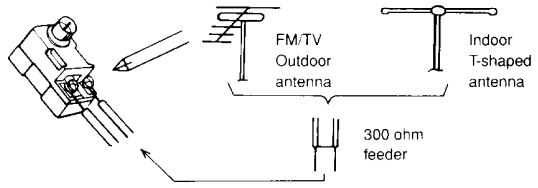
How to connect a 75/300 ohm antenna adapter (included)

■ **Connecting coaxial cable**

(1) With your fingernail or a small screwdriver, press the stopper inwards and remove the cover.
(2) Prepare the coaxial cable as shown below.
(3) Connect the 75/300 ohm antenna adapter to the coaxial cable



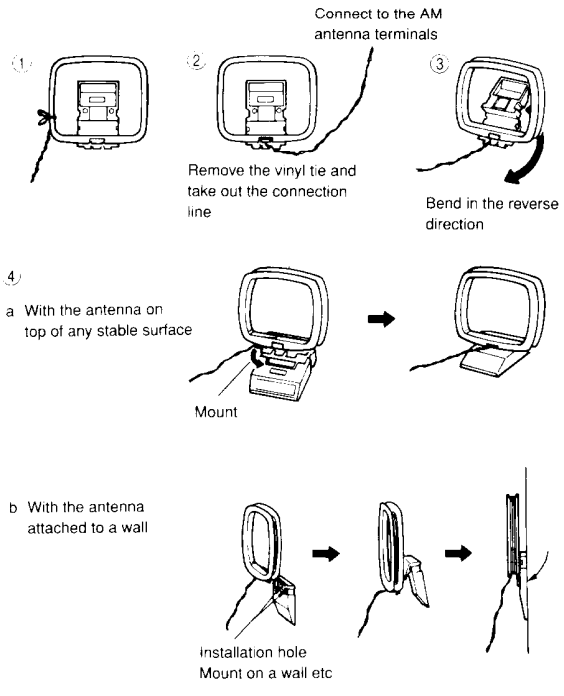
■ **Connecting T-shaped FM antenna or 300 ohm FM outdoor antenna**



AM antenna connections

An AM loop antenna is included in the installation instructions bag. Take out the connection line and connect it to the AM antenna terminals. This loop antenna can be placed on top of any stable surface or attached to a wall. Try several positions to determine which gives the best reception. Be sure the antenna is not near a speaker, power cord, television set, VCR, or motorized appliances. When using an external AM antenna, do not remove the loop antenna; connect both antennas to the AM antenna terminals.

AM loop antenna assembly



NOTE:

AM reception is easily affected by television sets and VCRs. Therefore, AM reception may be poor if this unit is placed too close to a TV or a VCR.

Turntable connections (PHONO)

Connect the output leads of the turntable to the PHONO jacks.
Be sure to connect the ground (earth) lead wire from the turntable to the ground terminal (GND). Lack of proper ground connection will cause hum. Turntables not provided with GND wires do not need to be connected.

1. Place the turntable on a firm shelf or deck free from vibrations (especially those generated by the speaker system). If the turntable is permitted to pick up such unwanted vibrations, not only with the performance of the unit drop, but distortion in the bass frequencies and howling in the speakers may also occur.
2. Check the turntable instruction manual for any other precautions.
3. The loud noises that occur when connecting and disconnecting the turntable leads, replacing the cartridge or lowering the tonearm could damage the speakers. Always turn the power switch off before making connections.
4. If an ONKYO turntable with remote control jack is used with this unit, the remote control transmitter can also be used to start and stop turntable operation. In this case, the turntable and TX-SV909PRO must be connected with a remote control cable.
   Insert the plug into the PHONO jack of the REMOTE CONTROL on the rear panel of the TX-SV909PRO (Please refer to "Connections for Remote Control".)

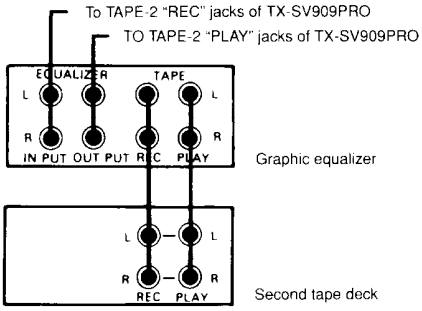
Compact Disc Player or other component connections (CD)

Connect the output leads of the CD player or an additional audio component to the CD jacks. An ONKYO CD Player with remote control that has the **RI** mark can be operated by the TX-SV909PRO. (Please refer to "Connections for Remote Control".) For more details, refer to your CD player instruction manual.

Tape Deck and Graphic Equalizer connections (TAPE-1, TAPE-2)

1. This unit has facilities for two Tape Decks. If you are using only one Tape Deck, connect it to the TAPE-1 jacks. If you have two Tape Decks, connect one to the TAPE-1 jacks and the other to the TAPE-2 jacks.
2. Connect the output leads of the Tape Decks to the TAPE-1 and TAPE-2 "PLAY" jacks. Connect the input leads of the Tape Decks to the TAPE-1 and TAPE-2 "REC" jacks of the unit. For more details, refer to your Tape Deck instruction manual.
3. To connect a Graphic Equalizer, too, use the TAPE-2 jacks and connect the second Tape Deck to the tape jacks of the equalizer.

To connect a Graphic Equalizer and second Tape Deck to the TAPE-2 jacks.

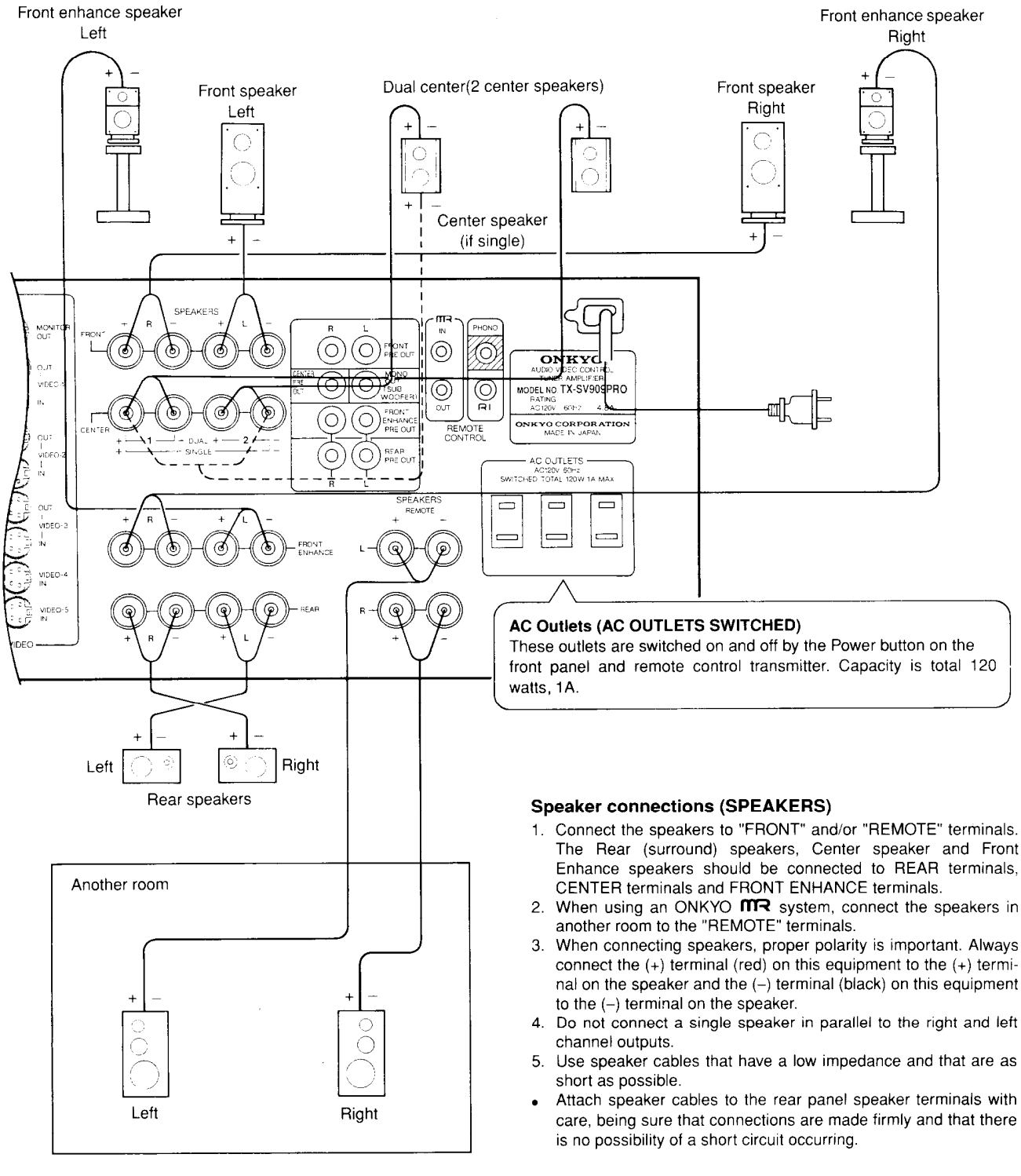


4. If you have an ONKYO Tape Deck with the **RI** remote control jack, connect it to the TAPE-1 jacks. Please refer to the section "Connections for Remote Control" regarding connection of the remote control cable.
5. When using a DAT, connect it to the TAPE-2 "REC""PLAY" jack.

Speaker connections (SPEAKERS)

Do not plug the power cord in the AC outlet until all connections have been made.

CAUTION: SPEAKER IMPEDANCE
FRONT: 6 OHMS MIN./SPEAKER
REMOTE, CENTER, FRONT ENHANCE,
REAR: 8 OHMS MIN./SPEAKR



AC Outlets (AC OUTLETS SWITCHED)
These outlets are switched on and off by the Power button on the front panel and remote control transmitter. Capacity is total 120 watts, 1A.

Speaker connections (SPEAKERS)

1. Connect the speakers to "FRONT" and/or "REMOTE" terminals. The Rear (surround) speakers, Center speaker and Front Enhance speakers should be connected to REAR terminals, CENTER terminals and FRONT ENHANCE terminals.
2. When using an ONKYO MR system, connect the speakers in another room to the "REMOTE" terminals.
3. When connecting speakers, proper polarity is important. Always connect the (+) terminal (red) on this equipment to the (+) terminal on the speaker and the (–) terminal (black) on this equipment to the (–) terminal on the speaker.
4. Do not connect a single speaker in parallel to the right and left channel outputs.
5. Use speaker cables that have a low impedance and that are as short as possible.

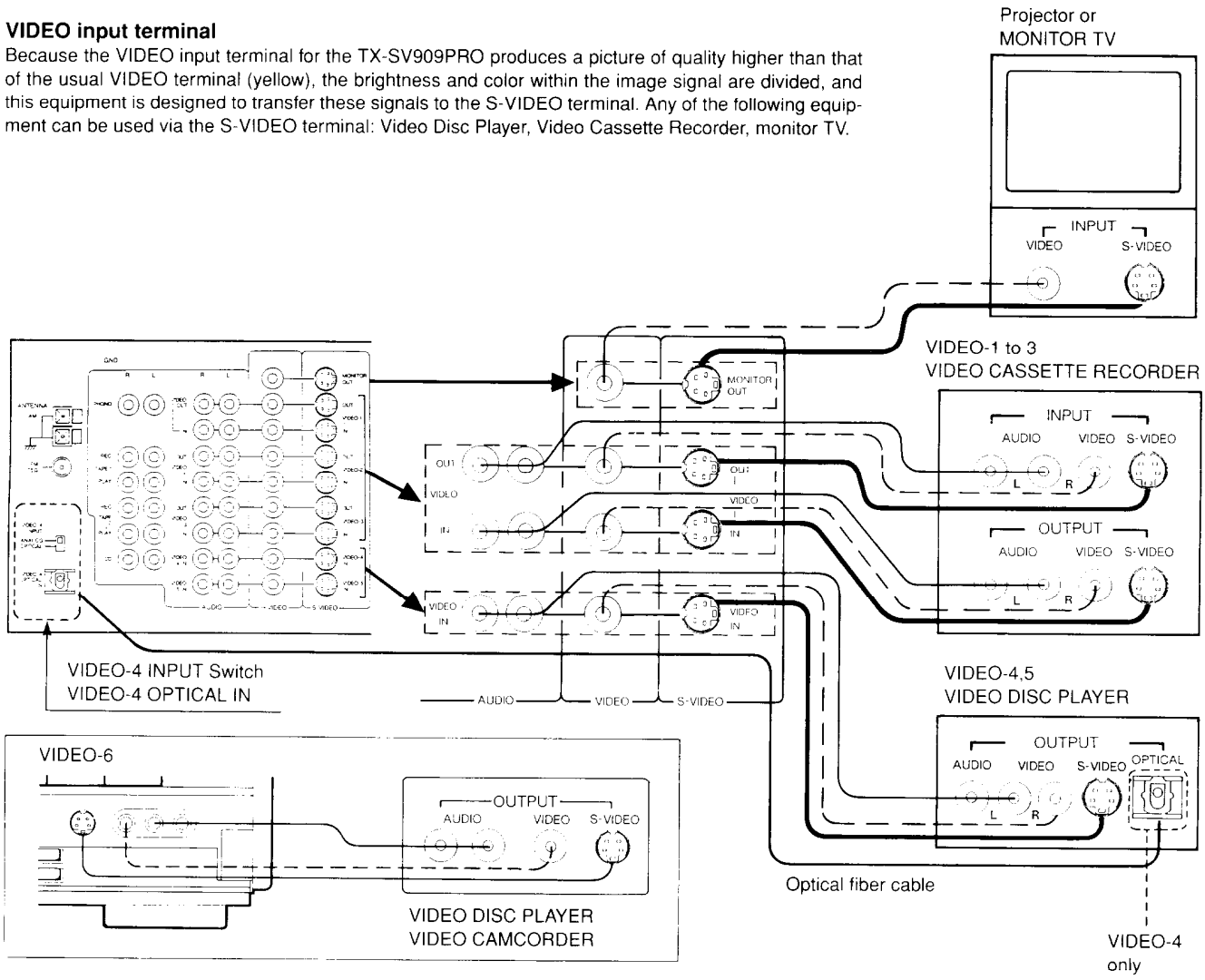
- Attach speaker cables to the rear panel speaker terminals with care, being sure that connections are made firmly and that there is no possibility of a short circuit occurring.

NOTE:

When using banana plugs, make sure the speaker terminal screws are screwed in firmly before inserting banana plugs.

VIDEO input terminal

Because the VIDEO input terminal for the TX-SV909PRO produces a picture of quality higher than that of the usual VIDEO terminal (yellow), the brightness and color within the image signal are divided, and this equipment is designed to transfer these signals to the S-VIDEO terminal. Any of the following equipment can be used via the S-VIDEO terminal: Video Disc Player, Video Cassette Recorder, monitor TV.



Video Cassette Recorder connections (VIDEO-1 to 3)

1. Connect the VIDEO output of the VCR to the rear panel (VIDEO) VIDEO-1 to 3 "IN" jack and the VIDEO input of the VCR to the rear panel (VIDEO) VIDEO-1 to 3 "OUT" jack.
   Then connect the AUDIO output of the VCR to the (AUDIO) VIDEO-1 to 3 L and R "IN" jacks. Finally, connect the AUDIO input of the VCR to the (AUDIO) VIDEO-1 to 3 L and R "OUT" jacks.
2. When using a playback-only VCR, only the output connections need to be performed.
3. For more details, refer to the VCR instruction manual.

Video Disc Player (or Video Cassette Player) connections (VIDEO-4,5)

Connect the VIDEO output of the Video Disc Player to the TX-SV909PRO (VIDEO) VIDEO-4 or 5 "IN" jack and the AUDIO output to the (AUDIO) VIDEO-4 or 5 "IN" jack.
For more details, refer to the Video Disc Player instruction manual.

When connecting another Video Disc Player or Video camcorder (VIDEO-6 on the front panel)

Connect VIDEO output from a Video Disc Player (or camcorder or video equipment) to VIDEO INPUT, and AUDIO output should be connected to the AUDIO INPUT for the VDIDEO-6. When the audio output of the video equipment is monaural, connect to the R audio input jacks. Sound will then come from both the L and R speakers.

VIDEO-4 OPTICAL INPUT

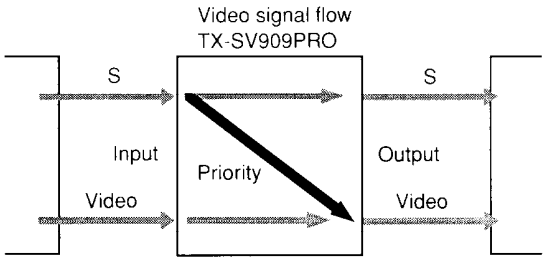
Connecting the OUTPUT terminal of the Video Disc Player with the optical digital output (sound) and the VIDEO-4 OPTICAL IN terminal of the main unit with an optical fiber cable enables higher class sound reproduction. To connect the VIDEO-4 OPTICAL IN terminal, change the VIDEO-4 INPUT switch on the rear panel of the main unit to OPTICAL, remove the protection cap from the VIDEO-4 OPTICAL IN terminal, and insert the optical fiber cable (model No. PC-121FB), sold separately, properly matching the shape of the terminal fully to the end.

NOTES:

- Some Video Disc Players do not have optical output terminals. When using analog recorded video media, change the VIDEO-4 INPUT switch on the rear panel of the main unit to ANALOG and connect it with the audio cable (pin cords).
- When not using the optical fiber cable, leave the protection cap on the VIDEO-4 OPTICAL IN terminal.
- OPTICAL input is not output to the REC OUT terminal of the TAPE 1, 2 and VIDEO 1, 2, 3.
- The optical input signal is not fed to the MULTI SOURCE. To use the MULTI SOURCE, a pin connection must be made as well.
- If you connect the optical input terminal of this unit to another ONKYO equipment that is equipped with an output terminal, you will have to connect the **RI** cable and the audio cable (pin cords) in order to use the remote control.

Video Input/Output

This unit has S input and S output connectors. A signal input into connector S will be output in both the S connector and the normal video connector. However, a signal input into the normal video connector will be output in only the normal video connector.



Projector and monitor-TV connections (MONITOR)

1. Connect the projector or monitor-TV VIDEO input to the TX-SV909PRO MONITOR "OUT" jack. There is no need to perform an audio connection since sound will be sent directly from the TX-SV909PRO to the speaker systems.
2. The TX-SV909PRO does not have an RF converter. Therefore, it can be used with only a monitor TV equipped with a video input jack.
3. Since the television set, tuner (FM/AM) section of this unit can cause interference that may disrupt sound and/or picture quality, the TV and TX-SV909PRO and their respective connection cables should be placed as far apart as possible. The use of a common TV/FM antenna is not recommended (see antenna connections section).

Cautions

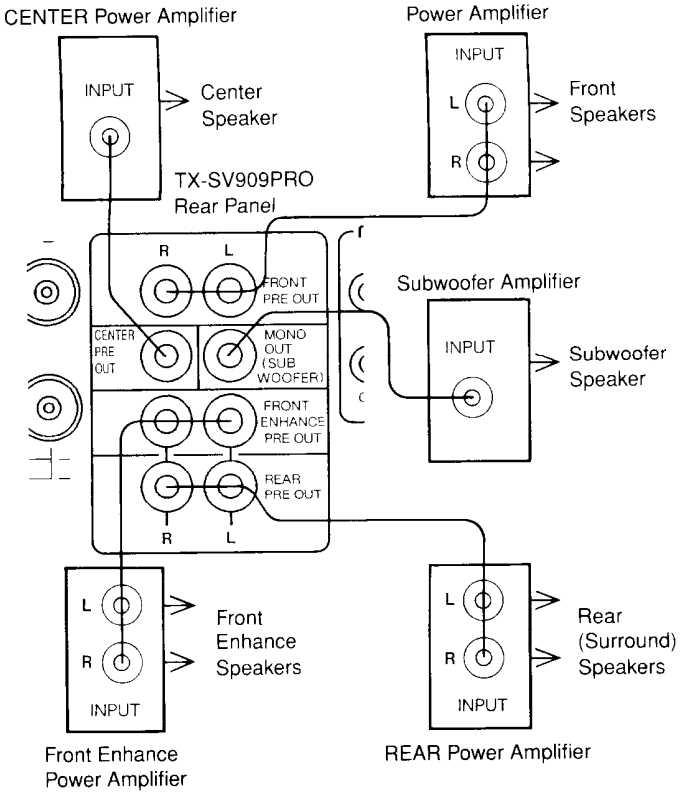
1. Be sure to connect video leads to video jacks, and audio leads to audio jacks. Incorrect connection will not only affect performance, but can cause damage.
2. Use care to connect left and right audio channels correctly. If improperly configured, surround playback will not be possible.
3. When a video deck or monitor-TV with an S input is connected to both the S connector and the normal video connector, some models automatically select recording or playback via the S connection (S connector input priority). When desiring to record or playback via the normal video connections, disconnect the S connections.
4. For details, refer to the instructions for the connected video equipment.

Amplifier connections

- **FRONT PRE OUT jacks**
  Another stereo power amplifier can be connected to the FRONT PRE OUT jacks.
- **REAR PRE OUT, CENTER PRE-OUT and FRONT ENHANCE PRE OUT jacks**
  During surround operations, when a separate amplifier is used for the Rear, Center and Front Enhance speakers, make the connections at the TX-SV909PRO REAR PRE OUT, CENTER PRE OUT and FRONT ENHANCE PRE OUT jacks, and INPUT jacks on the extra amplifier.
- **MONO OUT (SUBWOOFER) jack**
  For the basic surround operations, use the MONO OUT (SUBWOOFER) jack when reproducing low sounds. Connect the TX-SV909PRO MONO OUT jack with the SUBWOOFER amplifier INPUT jack.

NOTE:

No signals will be output from PRE OUT when the SPEAKERS MAIN button is turned OFF.

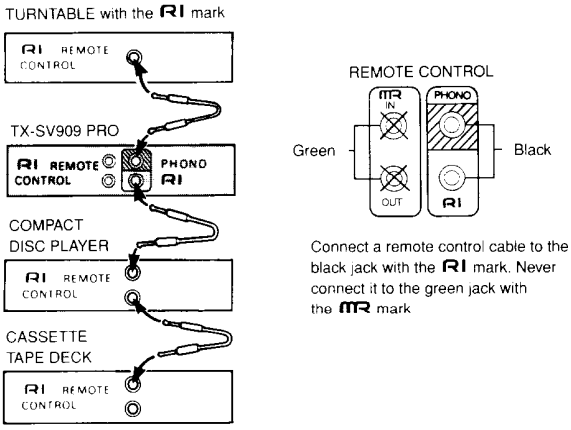


Connections for remote control (REMOTE CONTROL)

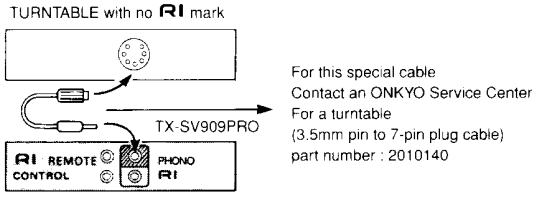
NOTE:

ONKYO turntables, Cassette Decks, CD Players, etc. with the RI mark as well as ONKYO turntables without the RI mark can be operated by remote control.

- A Cassette Tape Deck, Compact Disc Player, and turntable that have the ONKYO RI mark can be operated using the accessory remote control transmitter with the TX-SV909PRO.



An RI remote control cord equipped with a 0.136" (3.5mm) diameter miniature two-conductor phone plug is attached to the TX-SV909PRO and to any turntable or CD player, with the RI mark.



Insert the accessory RI remote control cable plug attached to the ONKYO turntable with the RI mark into the PHONO of the TX-SV909PRO REMOTE CONTROL. To use an ONKYO Compact Disc Player and Cassette Tape Deck with the RI mark, insert the accessory remote control cable plug into the REMOTE CONTROL jack. As far as connecting sequence is concerned, it doesn't matter whether the cable is connected from the TX-SV909PRO to the Cassette Tape Deck or to the Compact Disc Player. The connecting sequence is fixed only for the turntable. The remote control transmitter is operated by facing it towards the remote control sensor of the TX-SV909PRO.

- ONKYO turntables that can be remote controlled but do not have the RI mark. This equipment has a 7-pin DIN jack on the rear panel. Connect this jack and the jack on the rear of the TX-SV909PRO with the special cable for this purpose, which is sold separately.

NOTE:

Remote control operation is not possible when only the remote control cable is connected. Remote control cable and pin cord must be connected.

Multiple Room Remote System (MR)

The ONKYO HR-10 Remote Sensor (sold separately) greatly increases system flexibility. Used with your TX-SV909PRO, the HR-10 allows you to control speakers even when you are not in the same room as the TX-SV909PRO. In addition to basic functions like speaker on-off and volume and so on, you can also control most ONKYO CD Players, Cassette Decks and Digital Audio Tape Decks that use the RI (Remote Interactive) system. Adding an HE-50AC Remote Emitter (also available as an option) allows you to control even the non-ONKYO components in your home entertainment system from a separate room.

When the HE-50AC is being used to control more than one device from a distance but the infrared beams from the HE-50AC remote control transmitter alone will not reach these devices, connect an HE-10 (Remote Emitter head) to the HE-50AC, and set it up to be aimed at the devices to be controlled. The HW-2 cable 6-1/2' (2m) is attached with the HE-10. Up to three HE-10 units can be used with this equipment.

Connections for Multiple Room Remote Control

- When using only the HR-10 (option) to control TX-SV909PRO in the main room from another room, connect them as shown in Fig. 1. In this case, ONKYO CD Player and Cassette Tape Deck bearing the RI mark connected to the TX-SV909PRO can be controlled.

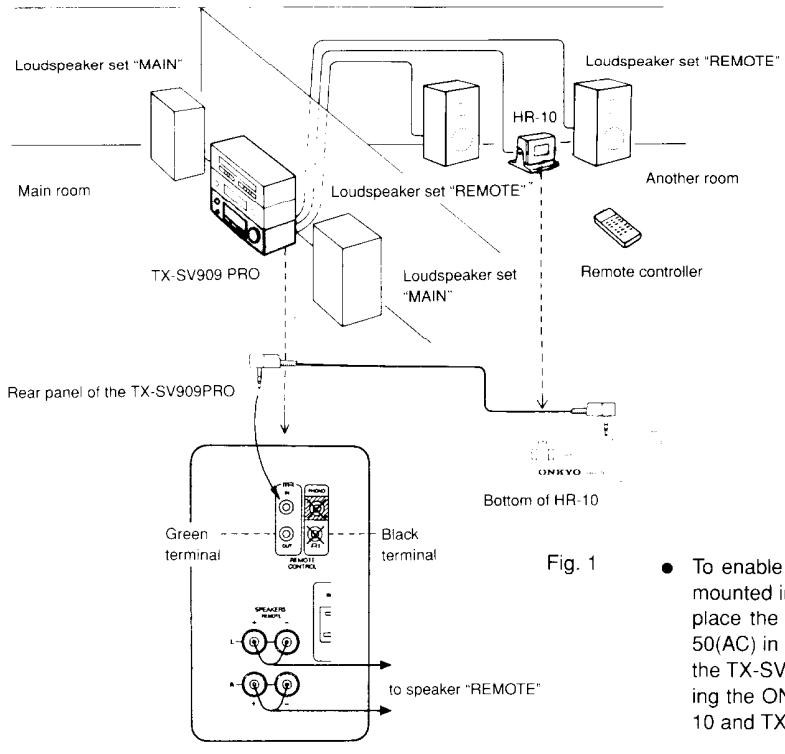


Fig. 1

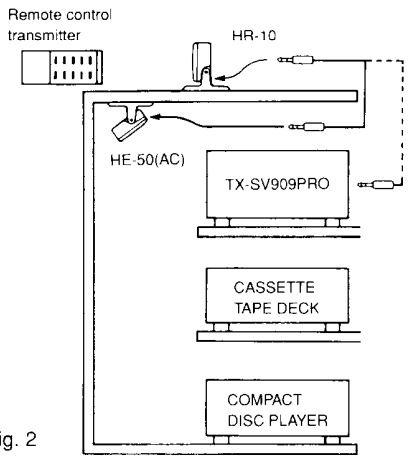


Fig. 2

- To enable remote control operation when the TX-SV909PRO is mounted in a rack which will not permit infra-red beams to pass, place the HR-10 somewhere outside the rack and set the HE-50(AC) in a position which will permit remote control operation of the TX-SV909PRO. The HE-50(AC) is not necessary when utilizing the ONKYO set with the RI mark. Please connect the HR-10 and TX-SV909PRO. (see Fig.2)

- A connection example using the HR-10 (option) and HE-50 (AC) (option) to control components in the main room from another room is shown in Fig. 3.
  If all the components can not be controlled by the HE-50 (AC) alone because they are installed at various places in the main room, use the Remote Emitter head HE-10 (option). In this case, if components possess the infrared remote control feature, they can be controlled even if they are not ONKYO products.

NOTE:

Make sure that the HE-50 (AC) faces TX-SV909PRO in the main room.

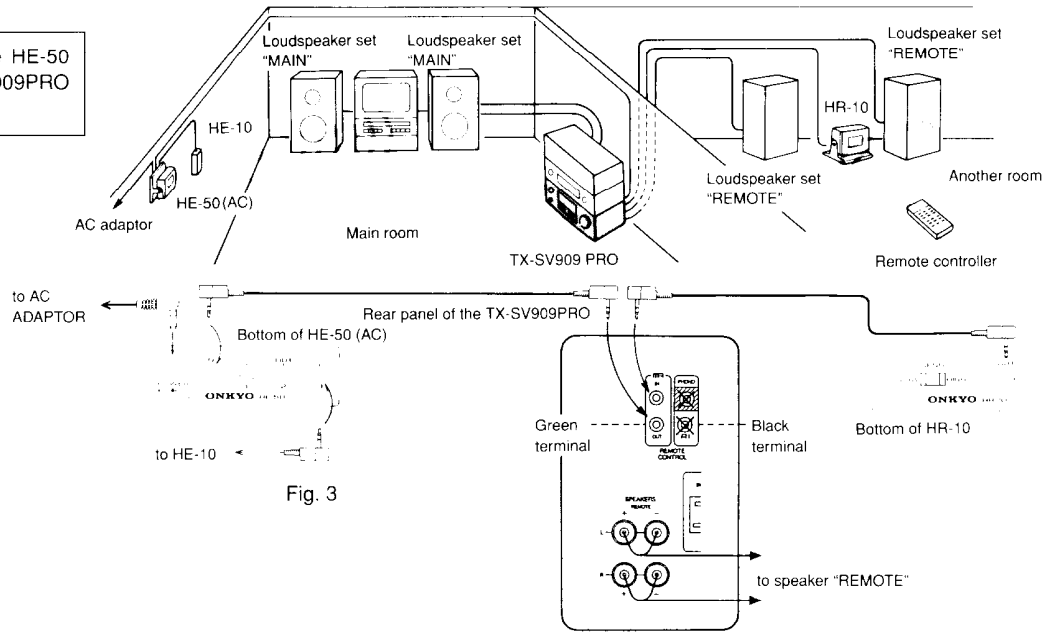


Fig. 3

Remote Sensor and Emitter (like the HR-10 and HE-50(AC)) should be connected with low capacitance shielded two coaxial cable with mini-plug 1/8" (3.5 mm diameter) connectors. Maximum cable length is determined by the characteristics of the particular cable used but approximately 164' (50 m) lengths are generally practical.
Ready made cable complete with mini-plug connectors are available in the following lengths: 6-1/2' (2m) (HW-2), 98-7/16' (30m) (HW-30), and 164' (50m) (HW-50).
(ONKYO cables may not be sold in some regions.)
Refer to the instruction manual which comes with the HR-10 when making these connections.
Use low impedance cables to connect the TX-SV909PRO in the main room and a set of loudspeakers in another room.

NOTES:

- Always unplug the AC power cords for the TX-SV909PRO and HE-50(AC) when connecting the MR .
- Insert the MR mini-plug into the GREEN TERMINAL on the rear panel of the TX-SV909PRO.
- Don't forget that you can always control your TX-SV909PRO with its supplied remote controller, even when you are also using the HE-10/HE-50(AC) Multi-Room Remote System. Simply aim the standard remote controller at the receiver's front panel Remote Sensor.

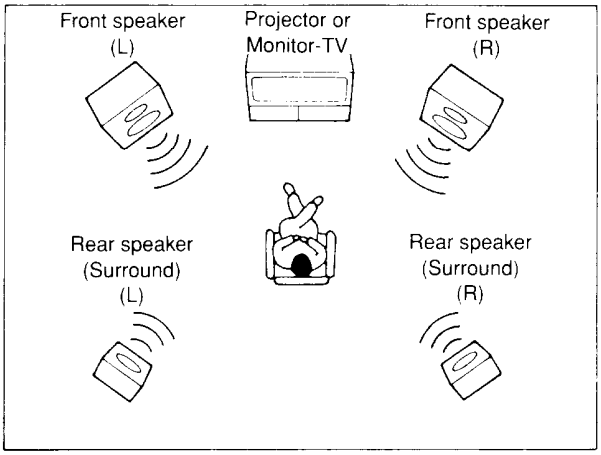
Speaker placement

This unit is Dolby Pro Logic and Ambisonic Surround compatible. Speaker placement plays an important role in the reproduction of sound using Surround. The manner in which the speakers are placed varies depending on the size of the room and the wall covering used in the room. The following shows an example of a layout for standard speaker placement. Refer to the example for placing the speakers appropriately in order to experience the best of Surround sound.

- In principle for Surround sound reproduction, two Front speakers and two Surround (Rear) speakers are required. Refer to the illustration on the right.

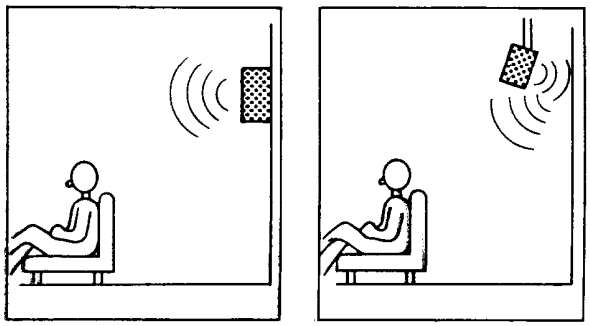
Front speaker setting

If the left and right Front speakers are placed too far away from each other, sound spreads out too much and is dispersed resulting in a diminished sound quality.



Rear speaker setting

To bring out the feeling of shifting sound, the Rear speakers should not be placed on the floor, it would be effective if they are placed above ear position. The speakers can also be placed facing to the ceiling or walls to reflect the sound.
When listening in Ambisonic Surround, place the Rear speakers at the same height of the Front speakers facing to the listeners to reproduce properly the same sound field as that when recorded.

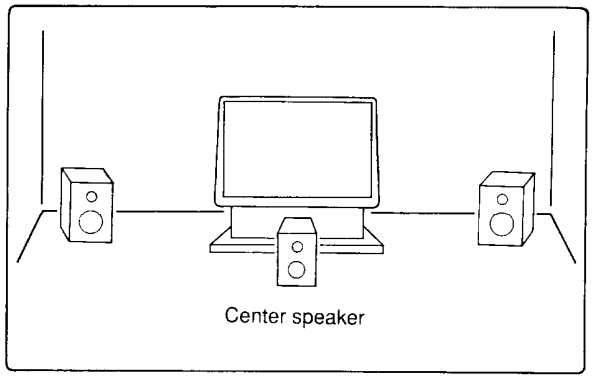


Center speaker setting

To enjoy Dolby Pro Logic Surround or Theater reproduction, a Center speaker(s) is (are) required in addition to the four basic speakers.

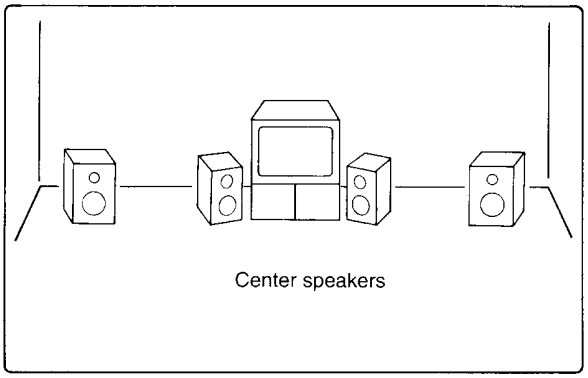
- **When one Center speaker is used**

If a screen with a projector is used, place the Center Speaker under the screen. If a monitor TV is used, it is recommended that the Center Speaker be placed on top or under the monitor.



- **When two Center Speakers are used**

Place the Center Speakers on the left and right sides of the monitor TV as close as possible to the screen, facing slightly inward. They can be placed on top and under the TV. Please use magnetic-proof type speakers, otherwise the speakers might cause uneven colors on the screen of the monitor TV.

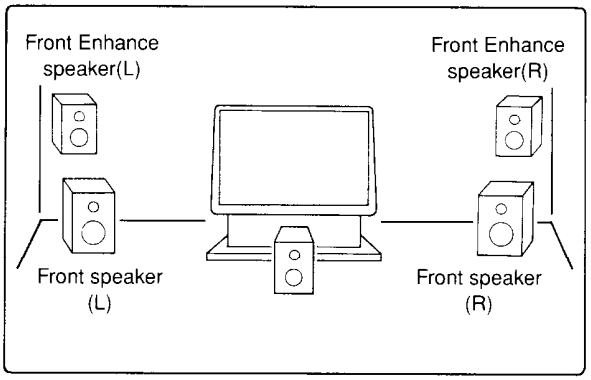


Front Enhance speaker placement

When the Surround mode is set to THEATER-1, 2, HALL-1, 2, LIVE CONCERT or STUDIO, it is more effective to install the speaker a little higher than the Front L/R speakers to reproduce the music with expanse of the deep effect sounds to which sound field processing has been applied

NOTE:

When MULTI SOURCE is ON, it is not output to the Front Enhance speakers. Front Enhance output is added to the Front L/R speakers.



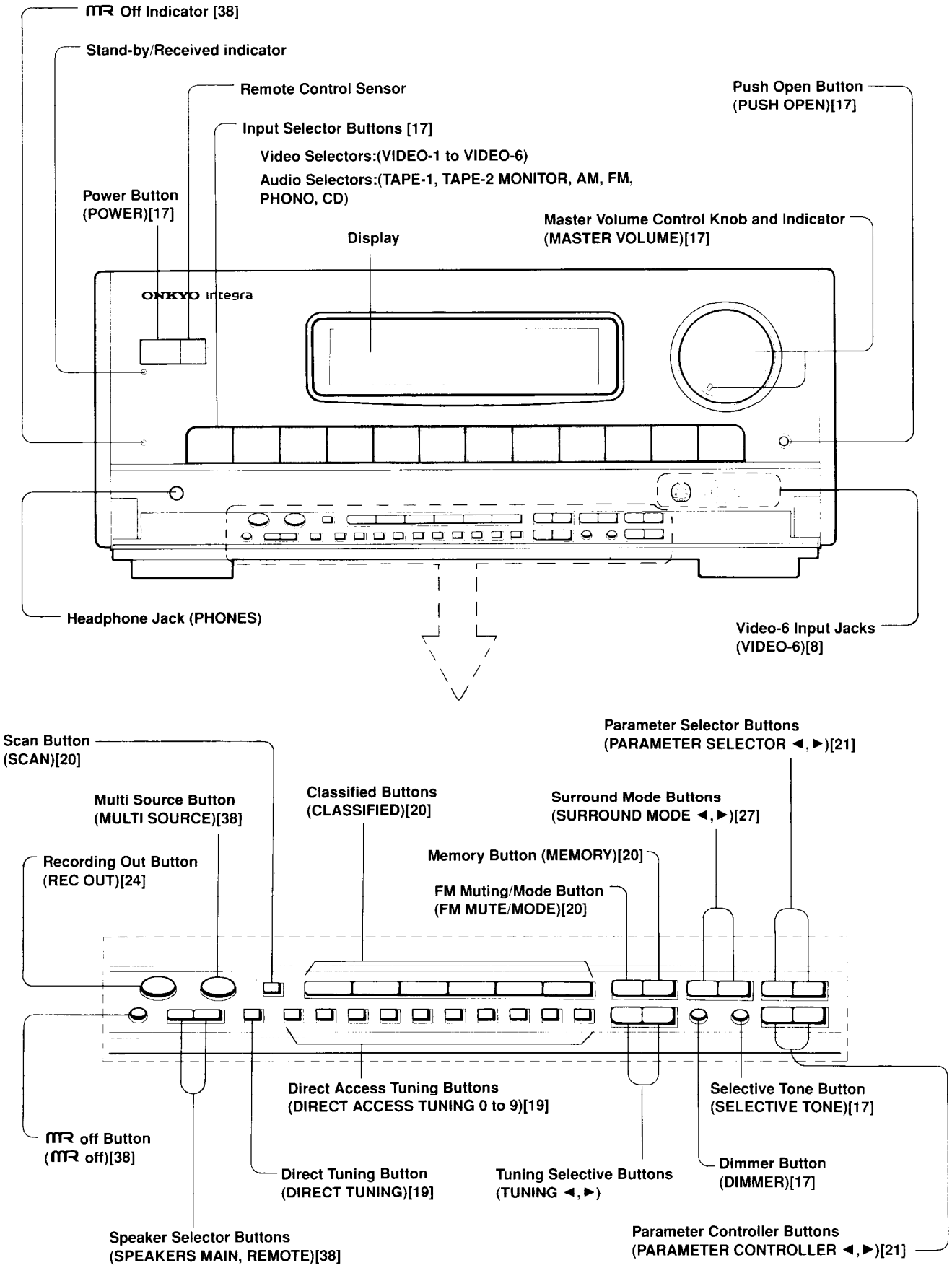
Subwoofer speaker placement

To enjoy the powerful low sounds, install a Subwoofer with a built-in power amplifier. The placement of the Subwoofer does not affect the final quality of the sound image too much, therefore, it can be installed, taking the room layout into consideration. To especially enjoy A/V Surround, the Subwoofer can bring out the best effect of Dolby Pro Logic Surround or D.S.P. (Digital Signal Processor).

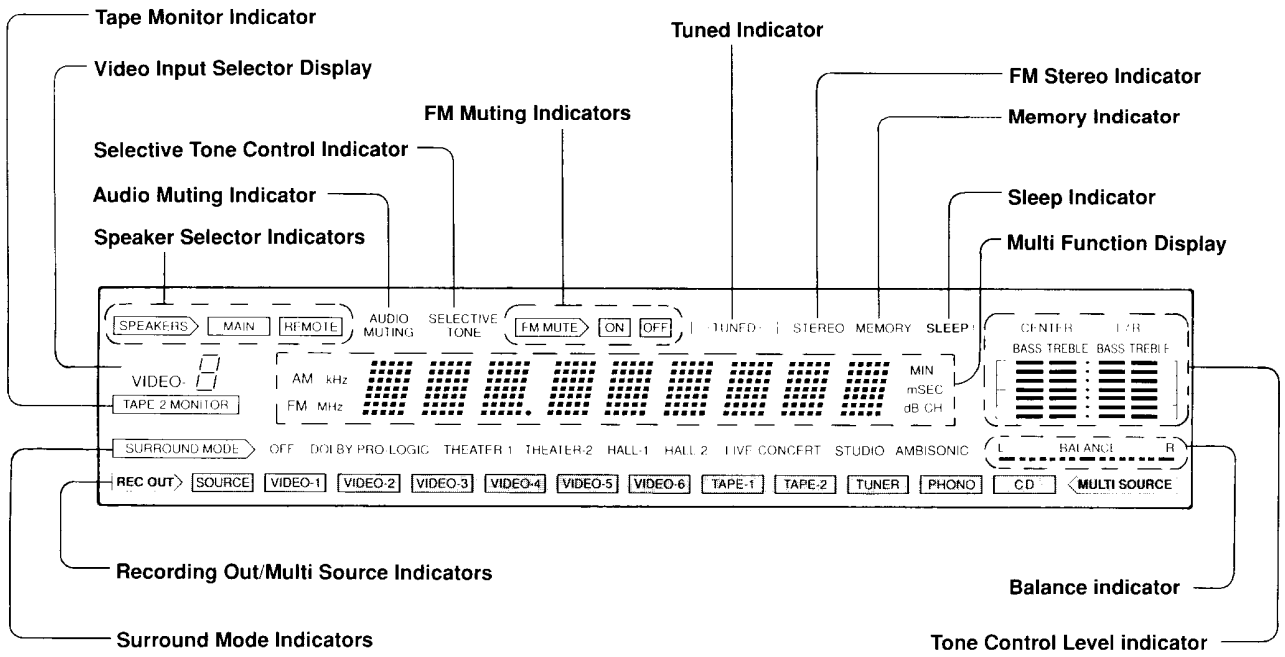
Control positions and names

Front panel

For more information about buttons or controls, turn to the page number listed in the [ ].

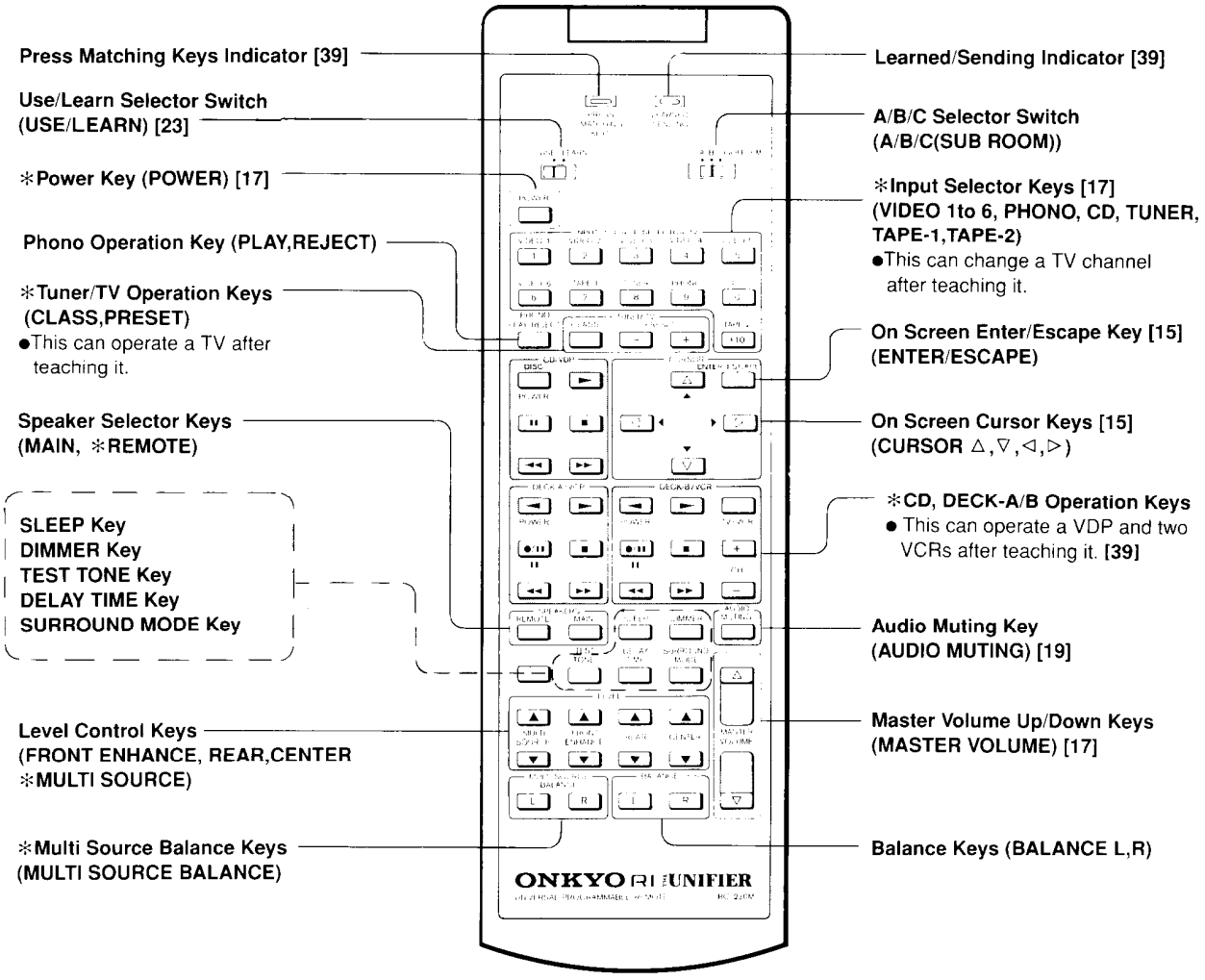


Display and indicators



Remote control transmitter RC-230M

- The following keys are used to control the TX-SV909PRO. Refer to pages 15, 23 and 39 for other key functions.
- When the A/B/C Selector switch is set to the "C" position, only keys marked with an asterisk are operable. When the switch is set to the "A" or "B" position, the REMOTE, MULTI SOURCE LEVEL, and BALANCE functions are not operable.



How to use the On-screen display function

The Onscreen function uses a monitor TV connected to the TX- SV909PRO as a display, and is classified into two categories.

1. The indication shown when the input selector is changed, or the volume of the Center/Rear/Front Enhance speakers is changed on the balance L/R Surround mode is changed. (Message display)
   - The message will automatically disappear after 3 seconds. However, this does not apply when the unit is in the muting mode, when the test tone is turned "ON". The message will turned off 3 seconds after the muting or test tone is turned off.
2. Indication shown when the ENTER/ESCAPE keys on the remote control unit are pressed (Menu screen)
   - The menu screen can be operated by means of CURSOR key on the remote control unit. The monitor TV should be connected to the TX-SV909PRO to utilize this function. (See page 9.)

Message display

The following items will be shown on the display during the operation of TX-SV909PRO main unit or remote control unit .

① When the power of TX-SV909PRO is turned ON
- The screen will display the input selector on the lower right corner.

② When the input selector is changed
- The source selected will be shown on the lower right corner of the screen.

③ When the Surround mode is changed
- Selected Surround mode will be displayed.

④ When the AUDIO MUTING key is turned on with the remote control unit, the MUTE display will flash on the upper right of the screen.

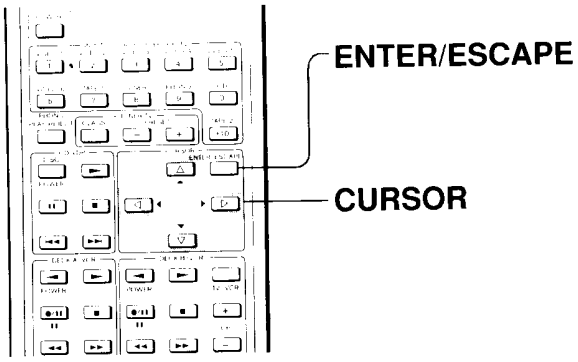
⑤ When TEST TONE is turned on with the remote control unit, TEST will be displayed on the upper right of the screen.

⑥ When pressing the CENTER (▲, ▼) keys, REAR (▲, ▼) keys, FRONT ENHANCE (▲, ▼) keys, BALANCE (L, R) keys on the remote control.
- CENTER, REAR, FRONT ENHANCE, BALANCE L .... R will be displayed on the lower part of the screen.

How to use the menu screen

The ENTER/ESCAPE key and CURSOR keys (△, ▽, ◁, ▷) of the remote control unit are used to set the Surround mode, Surround tuning, tone control and L/R barance and to select the input selector.

- Cursor: black and white reversed letters on the screen
- Onscreen displays the images in the background when a video source is played and displays on a blue screen when it is not played back. Onscreen is output only to the monitor out terminal, not to the record terminal (OUT). Therefore, even if an image is displayed on the monitor television when recording, the letters are not recorded.
- Item for each setting screen differ depending on Surround mode, etc. Pressing ◁ or ▷ button of some items may display a separate sub-screen.

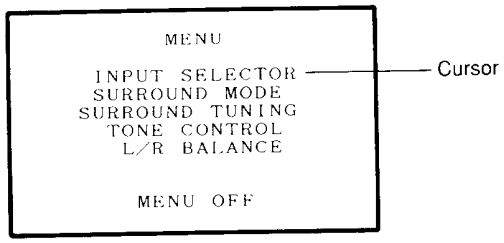


■ **ENTER/ESCAPE key**
Used to recall the Onscreen or select the menu screen.

■ **CURSOR keys**
△, ▽ :Used to move the cursor upward and downward on the screen.
◁, ▷ :Used to move the cursor to the left and right on the screen and to change the parameters and conditions of the items on which the cursor is located.
- Holding down the key will change the parameter or move the cursor continuously.

Follow the basic procedure below.

① Press the ENTER/ESCAPE key.
- Menu screen will be displayed.



- When the SURROUND MODE is OFF, no parameters will be shown on the SURROUND TUNING screen.

② Select the desired menu using the CURSOR key △ or ▽.
- Cursor will move upward and downward.

③ Press the ENTER/ESCAPE key again.
- The second screen of the menu will be displayed.

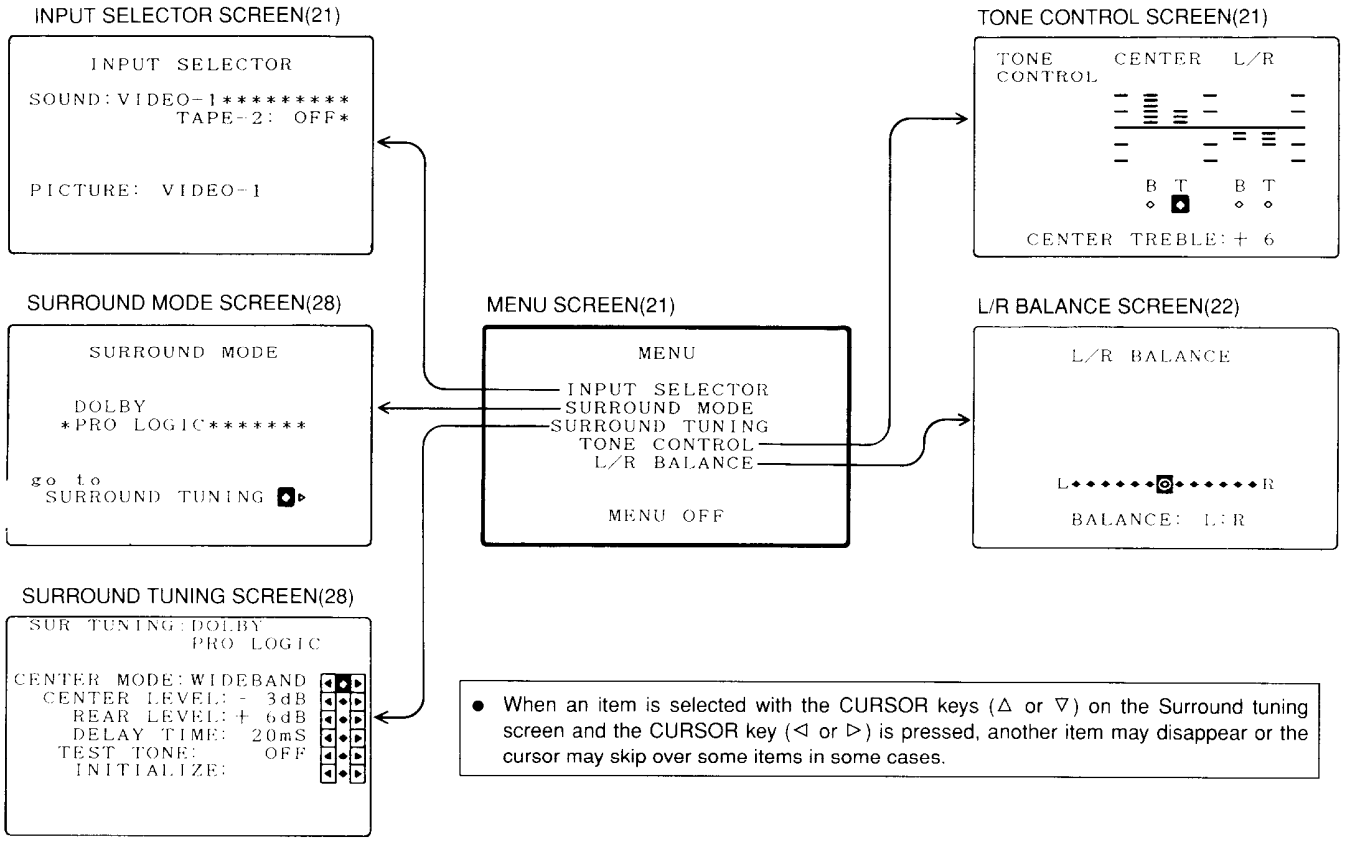
④ Select the desired item using the CURSOR key △ or ▽ and change the parameters and conditions of the items using the CURSOR key ◁ or ▷.

⑤ Press the ENTER/ESCAPE after all the desired conditions have been input.
- The screen will display the menu.

⑥ Use the △ or ▽ CURSOR to select MENU OFF.
Press the ENTER/ESCAPE key again to turn the menu screen off.
- Repeat steps ② - ⑤ without step ⑥ included in order to use another functions.

The screen changes as follows

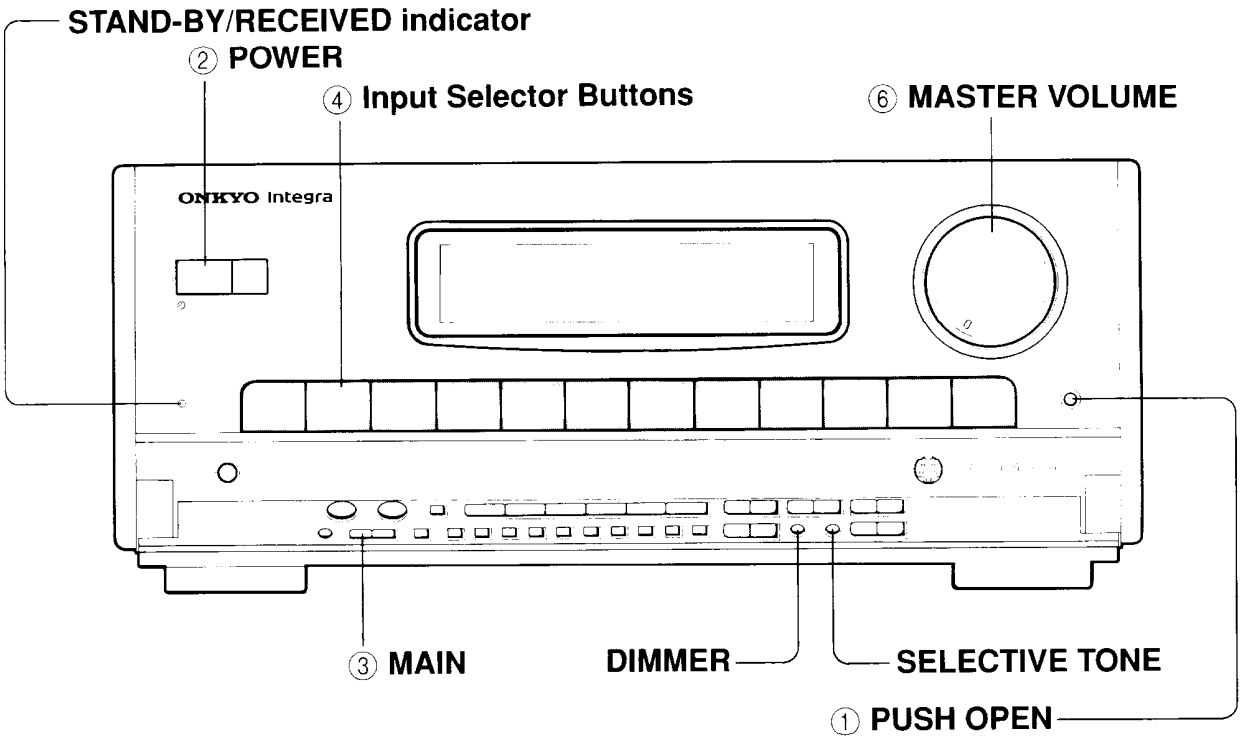
- Please refer to the page inside the parentheses for details about each screen.

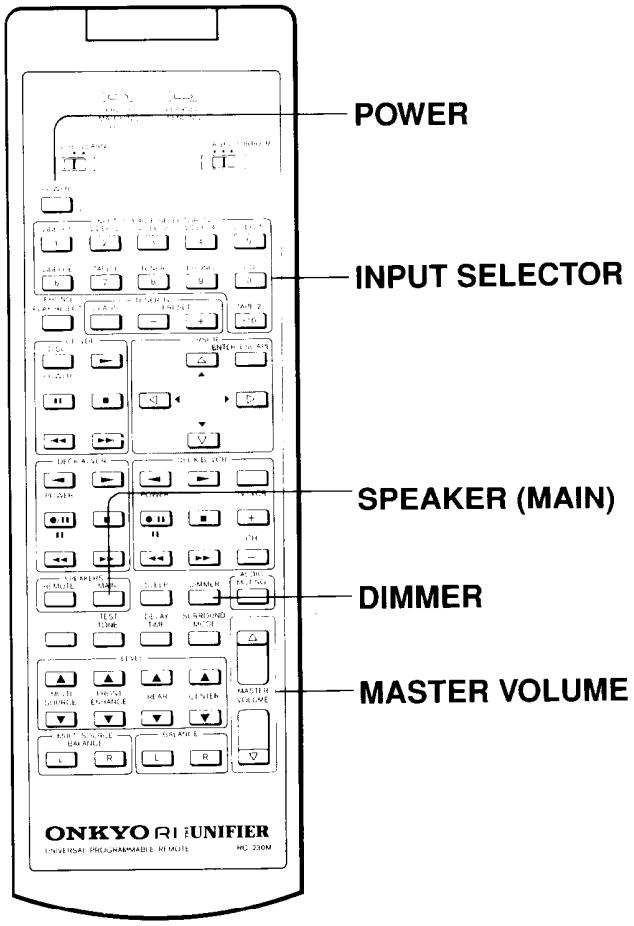


- When an item is selected with the CURSOR keys (△ or ▽) on the Surround tuning screen and the CURSOR key (◁ or ▷) is pressed, another item may disappear or the cursor may skip over some items in some cases.

To listen to your favorite source

When operating with the main unit





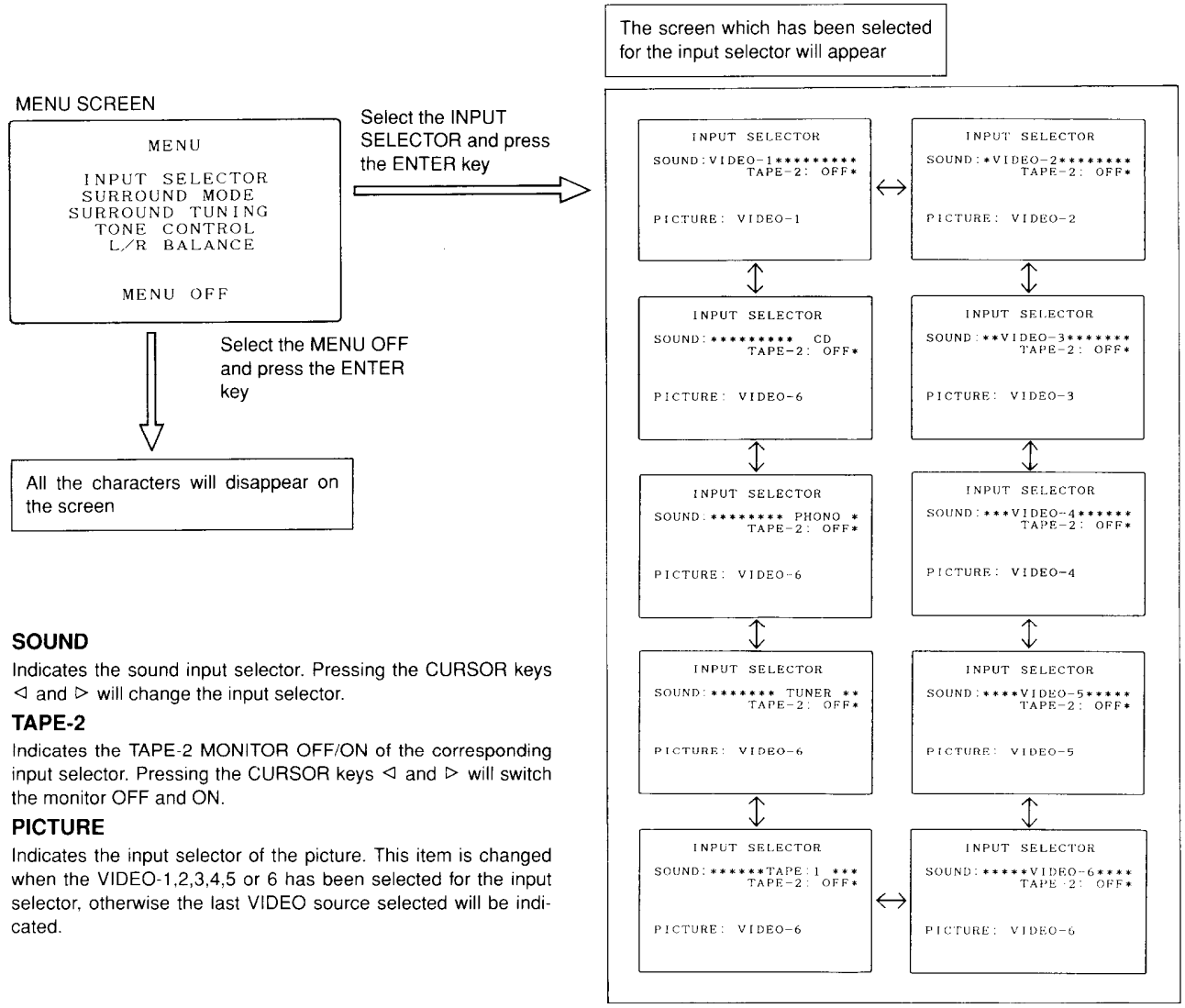
① Press the PUSH OPEN button to open the door.
② Press the POWER button to turn on the power.
③ Press the MAIN button of the Speaker selector.
- MAIN indicator lights up.
  When using headphones, use the jack behind the door. Stereo headphones with a standard binaural plug can be connected here. (Sound from the Front speakers is output.) The sound from the headphones in the Surround mode may be different from that which is obtained from speakers. The sound in the headphones may seem relatively far-away.

④ Press one of the desired INPUT SELECTOR Button (VIDEO-1~6, TAPE-1, TAPE-2, MOMITOR, AM, FM, PHONO, CD)
Make sure that the connections between the input sources are correct.
- The button pressed is shown in display. For FM or AM, the band and the frequency are shown in display.
- Confirm that the TAPE-2 MONITOR indicator is off when a source other than the TAPE-2 MONITOR has been selected. Also check the audio muting is off.
- Please refer to the operations from page 28 onward in order to play the selected source with Surround.

⑤ Start play of the selected input source.
- Follow the operating instructions of that unit.
- If FM or AM is selected, please refer to the section "TUNER RECEPTION".

⑥ Adjust the MASTER VOLUME control knob to the appropriate level.
⑦ Please refer to " Tone control" on page 21 and "Left/ Right balance control" on page 22 for how to adjust the Tone controls and the Left/Right balance.

When operating with the CURSOR on the screen using the remote control unit



1. SOUND

Indicates the sound input selector. Pressing the CURSOR keys ◁ and ▷ will change the input selector.

2. TAPE-2

Indicates the TAPE-2 MONITOR OFF/ON of the corresponding input selector. Pressing the CURSOR keys ◁ and ▷ will switch the monitor OFF and ON.

3. PICTURE

Indicates the input selector of the picture. This item is changed when the VIDEO-1,2,3,4,5 or 6 has been selected for the input selector, otherwise the last VIDEO source selected will be indicated.

Explanation of the buttons (Keys)

■ **Power Button (POWER) and Stand-by/Received Indicator**

The Stand-by/Received Indicator comes on when the AC power cord for this unit has been inserted in an outlet. This indicates that the TX-SV909PRO is standing by for operation. Pressing the POWER button or remote control POWER key, the main unit will come on, and power will be supplied from the AC outlet to the rear panel. This indicator then goes off. The indicator also lights when a signal is received from the remote control unit.

■ **Speaker selector buttons (SPEAKERS MAIN/REMOTE) and indicators**

This unit can drive two pairs of front speakers in pairs (MAIN or REMOTE) or fours (MAIN and REMOTE). To listen to both speaker systems at once, depress both speaker selector buttons. When operating the Front Enhance speakers to reproduce Surround, REMOTE SPEAKER is off. The MAIN button turns on/off the Center, Rear and Front Enhance speakers at the same time during Surround mode.

MAIN and REMOTE selector can be operated through the MAIN and REMOTE key on the remote control transmitter.

NOTES:

- The REMOTE speaker selector can be turned ON/OFF in multi source mode.
- When turning REMOTE speaker selector ON/OFF with the remote control transmitter, set the A, B, C (SUB ROOM) Selector switch to C (SUB ROOM).

■ **Master volume control Knob (MASTER VOLUME)**

Use the MASTER VOLUME control knob to adjust the volume of the Front, Rear (Surround) Front Enhance Center speakers and pre out level at the same time. Turn clockwise to increase the volume level. The volume can be adjusted manually and by the remote control transmitter's volume UP/DOWN keys. When adjusted by remote control, the volume knob rotates along with the volume indicator on the knob. This allows you to see the volume level from a distance. Volume for the center rear or front enhance speaker is controlled by using the FRONT ENHANCE ▲/▼, REAR ▲/▼, CENTER ▲/▼ keys on the remote control transmitter.

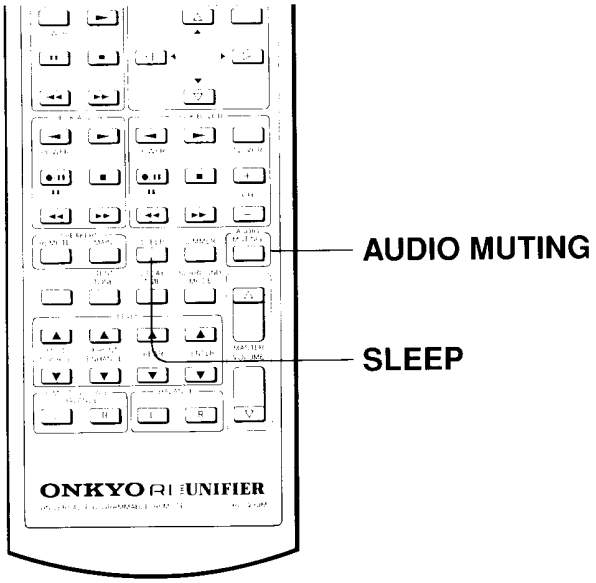
■ **Selective tone control button (SELECTIVE TONE) and indicator**

Switching on this button lights up the indicator and improves the reproduction quality of the ultra low frequencies and high frequencies. (Operates when the Surround mode is off.)

■ **Changing the brightness of the display**

The DIMMER button can be used to change the brightness of the display.

- The switch changes the display brightness in three steps (bright, medium, dark)



■ **Audio muting key (AUDIO MUTING) (Remote control transmitter only)**
This key temporarily switches off the sound from the speaker or headphone. Pressing this key will operate the TX-SV909PRO audio muting circuit. The audio muting indicator "AUDIO MUTING" will flash. Pressing the button again or using the POWER key on the remote control transmitter to turn the power on will turn off the audio muting.

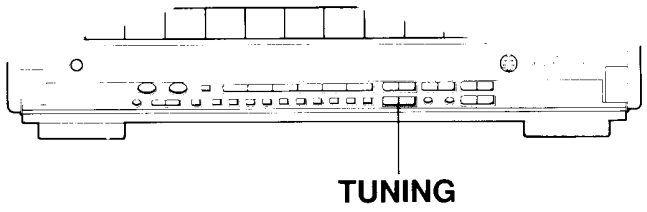
- Pressing this key does not mute the sound of the multi source.
  Press the SPEAKERS REMOTE key to mute the sound of the multi source.

■ **Sleep key (SLEEP) (Remote control transmitter only)**
Press to set the power off timer. The sleep timer is a function which key off the power to the system from the time it is set. When this key is pressed, "90 MIN" is displayed for 5 seconds, and the power goes off 90 minutes later. Each time the key is pressed during 5 seconds, the timer setting changes, by 10 minute intervals, such as 80, 70, 60 .... While the sleep timer is operating, the [SLEEP] indicator is lighted. If the sleep key is pressed during this time, the amount of time remaining on the sleep timer is displayed, and if the key is pressed during that display, 10 minutes will be subtracted from that time.
If the key is pressed when the panel display shows 10 minutes or less, the sleep timer is cancelled, and the power is not turned off.

Tuner reception

Press the FM or AM input selector button and make sure that the TAPE-2 MONITOR indicator is off and audio muting is off.

■ **Tuning with the TUNING buttons**

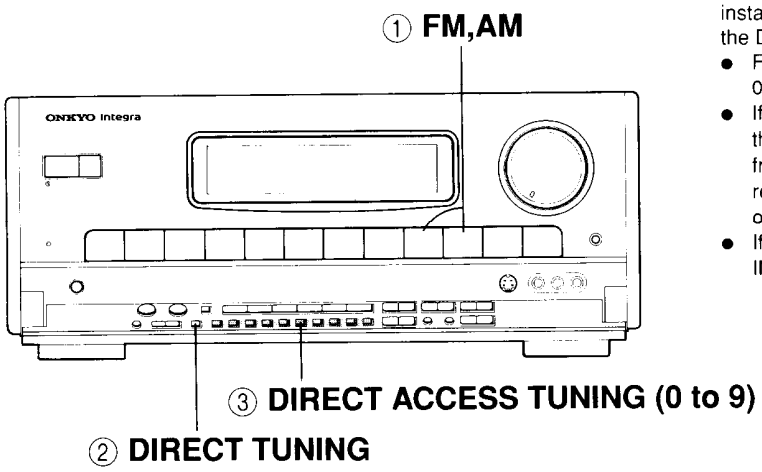


To tune in an FM or AM station not stored in the memory, press one of the Tuning selector buttons. If you press UP, the frequency is increased. Pressing DOWN decreases. Note that the frequency is changed in 50kHz steps in FM and 10kHz (or 9kHz) steps in AM when the tuning selector button is pressed in single steps. If this button is pressed continuously for more than 0.5 seconds, the auto tuning mode is entered, and frequencies are scanned automatically. When a broadcast signal is received, scanning stops and that frequency is displayed. If a different frequency is desired, press the button once again.

- Scanning will not stop for broadcasts weak enough to be suppressed by the muting circuit. To receive a weak FM broadcast, set the FM MUTE/MODE button to the OFF position and select the frequency of the desired broadcast station.

■ **Tuned indicator**
This lights when an FM or AM broadcast ids being properly received. This indicator does not light for weak broadcasts.

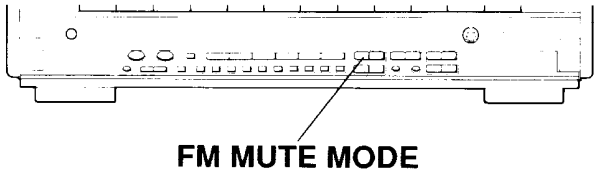
■ **Receiving a station by inputting the frequency for the station directly (Direct tuning)**
If the frequency for the desired station is known, input the frequency number directly.



① Press the AM or FM button of the Input selector buttons.
② Press the DIRECT TUNING button.
- "-" will flash for 16 seconds in the Frequency display.

③ Input the desired frequency number by using the DIRECT ACCESS TUNING Buttons while the cursors are flashing. For instance, if you wish to receive the station of 88.10MHz, press the DIRECT ACCESS TUNING buttons, 8, 8, 1 and 0.
- For AM reception, inputting a number to the 10kHz digit sets 0 to the 1kHz digit automatically.
- If the desired frequency set in this operation does not exist, the frequency which is the nearest and lower than the desired frequency will be received. If the frequency set is not in the receive frequency range, the frequency flashes for two seconds and then the previous frequency will be displayed.
- If a wrong frequency has been set, press the DIRECT TUNING button and start again.

■ **How to use the FM Muting/mode button (FM MUTE/MODE)**



In the Muting ON (STEREO) setting, FM stereo reception is possible and the muting circuit suppresses interstation noise and weak FM stations. In the OFF (MONO) setting, interstation noise will be heard and even weak FM stations can be received. (Muting/mode operation is effective for only FM reception.)

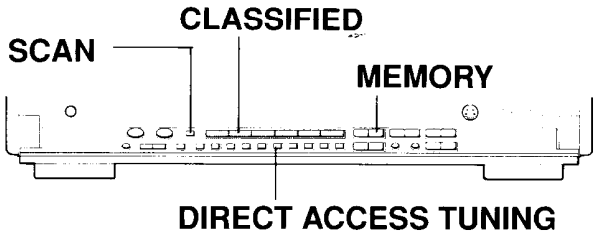
- The stereo indicator will light up if the broadcast is being received in stereo. The stereo indicator will not light up if the broadcast is monaural or too weak to be received in stereo.

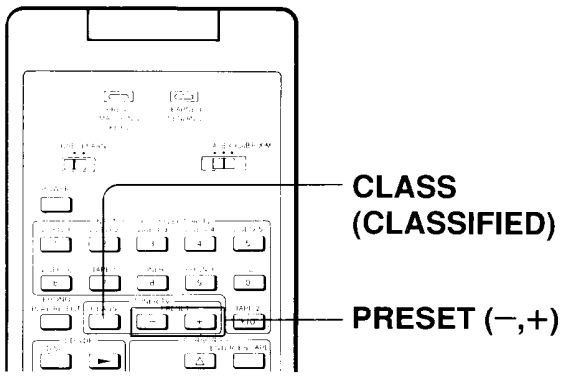
Classified memory function

The memory can be divided (classified) for different users or programs of stations.

NOTE:

There are times when frequencies are left in the machine's memory from the final testing done prior to shipment. If this is the case with your TX-SV909PRO, cancel unnecessary preset stations according to "How to cancel memorized stations" and memorize desired frequencies.





■ **How to classify stations**

With this model, six classes (CLASS A to F) are available and stations can be memorized in any class. A total of 40 stations can be memorized in classes from A to F. Although the same station can be memorized in different classes, the memory number for the station will differ depending on the order in which the station is memorized in the classes.

① Tune in the desired station (see section on "TUNER RECEPTION").
② Press the MEMORY button.
- The MEMORY indicator will flash for 8 seconds.

③ Press the desired CLASSIFIED MEMORY button (one of buttons A to F).
- The station is memorized in the selected class with the memory number which is the smallest of the unoccupied numbers in the class.

By repeating the operations above, up to 40 stations can be memorized. If an attempt is made to memorize 41 stations or more, "FULL" will be displayed indicating that no more stations can be memorized.

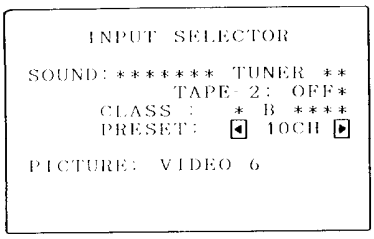
■ **How to cancel memorized stations**

Retrieve the class number you want to cancel (see "How to retrieve memorized stations") and then press the MUTE/MODE button while holding down the MEMORY button. Another station can be memorized with the memory number which has been cancelled.

■ **How to retrieve memorized stations**

1. Press the CLASSIFIED button for the desired class. If remote control is used, the class next to the present one is retrieved when the CLASS button is pressed.
   - The memory number (station) which was being received before the class is retrieved will be received.
2. There are several methods to proceed after the above operations are carried out. Use any of the following methods.
   a. Pressing the same CLASSIFIED button again permits the next preset memory number (station) to be received.
   b. Input the memory number you wish to receive by using the DIRECT ACCESS TUNING buttons.
      - If the memory number consists of 2 digits, input two numbers, immediately one after the other. For instance, when inputting "15", "15" will not be registered if you wait more than one second before inputting "5", resulting in only "1" being registered.
      - If a number other than a number from 1 to 40, or a number which has not been memorized is input, the number flashes for 2 seconds and then the number which was displayed before will be displayed.
      - If a number between 1 and 4 is pressed, the display and station are changed 1 second later.
   c. Press the SCAN button
      - Stations memorized in the present class will be scanned in a order and the corresponding memory number will flash in the Preset station display at each scan. After the last memory number of the class is reached, scanning starts again from the first memory number of the class. Pressing the CLASSIFIED SCAN button again stops scanning.
   d. When the PRESET − or + button of the remote controller is pressed, the memory number of the class currently being received will be incremented or decremented. Keeping pressing the button increments or decrements continuously. After the maximum or minimum number is reached, the next class or one before the present class will be entered.

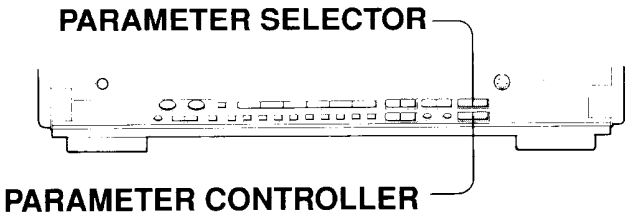
Operating with the Onscreen cursor



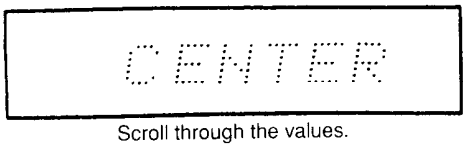
- CLASS: Indicates the class of the TUNER preset memory. Pressing the CURSOR keys ◁ and ▷ will change the class. When the class is changed, the preset channel shown below the newest class will indicate the last channel of the corresponding class. The class for which the channel is not preset will be skipped.
- PRESET: Indicates the channel preset for the selected class of the TUNER. Pressing the CURSOR key ◁ will change the channel downward, and pressing the CURSOR key ▷ will change the channel upward.

Tone control

When operating with the main unit



1. Use the ◀ or ▶ button of the parameter selector to select the parameter you want to adjust.
   - Tone control has Center Bass, Center Treble, L/R Bass, and L/R Treble.
   - Center Bass/Treble are effective/enabled when the Surround mode is Dolby Pro Logic or Theater -1, 2 and when Center mode is NORMAL or WIDEBAND.
   - When the parameter you want to adjust is selected, the letters scroll and the current set value is displayed for 8 seconds.



Scroll through the values.

   - The display stops when the set value is displayed.

2. Press ◀ or ▶ button of the PARAMETER CONTROL to set the desired value.
   - You can adjust it by 2 between -12 and +12. 0 is the flat characteristic.
   - When the input selector display appears, press ◀ or ▶ button of the PARAMETER SELECTOR.
   - Bars are displayed on the right of the display tube.

Memory preservation

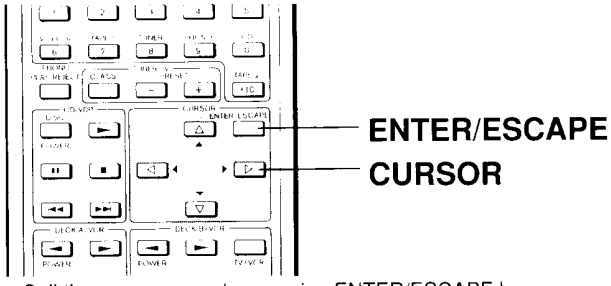
This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

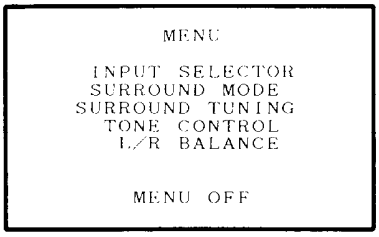
NOTE:

- If the frequency of the broadcast station is not set for each CLASS, the CLASS or PRESET indication will not change.

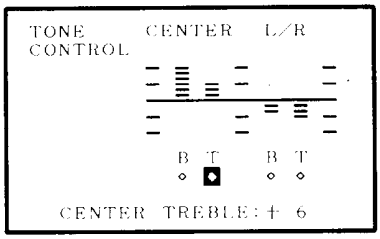
When operating with the CURSOR on the screen.



1. Call the menu screen by pressing ENTER/ESCAPE key.
2. Press the ▽ or △ CURSOR keys to set to "TONE CONTROL".



3. Press the ENTER/ESCAPE key.
   - The screen for setting tone control will appear.
4. Press ◁ or ▷ key of the CURSOR keys to select Center B (BASS), T (TREBLE), L/R B (BASS) or T (TREBLE).
5. Press the ◁ or ▷ CURSOR keys to adjust Level.
   - The name of the level you are adjusting and the value will be displayed on the bottom of the screen.



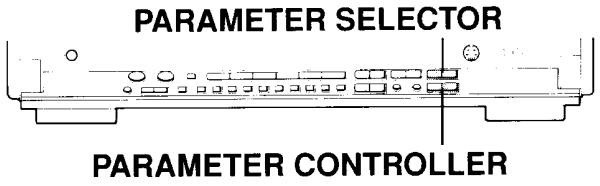
6. Pressing the ENTER/ESCAPE key will give you the initial menu screen.

NOTE:

- TREBLE and BASS are effective for the L, R and CENTER of the speakers. The best effect from Dolby Pro Logic Surround can be obtained when equal settings are used for the sound from the L/R Front speakers and the sound from the Center speaker for the middle and treble ranges.

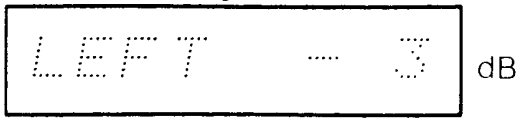
Left/Right balance control

When adjusting with the main unit



1. Press the ◄ or ► button of the PARAMETER SELECTOR to select balance.
   - When balance is selected, the letters scroll and the current set value is displayed for 8 seconds.

Scroll through the values.

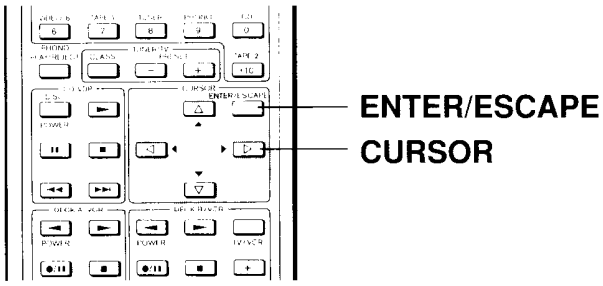


   - The display stops when the set value is displayed.

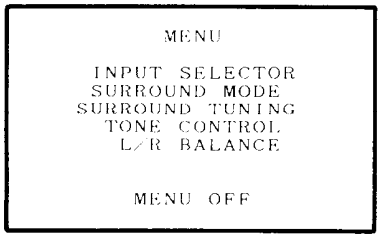
2. Press the ◄ or ► buttons of the PARAMETER CONTROLLER to adjust the left and right sound volume.
   - Pressing the ► button decreases the volume of the left side. Pressing the ◄ button decreases the volume of the right side.
   - When the volume of the left and right are the same, L/R 0dB is displayed.

   - Pressing the ◄ or ► button makes changes as follows: 0 ↔ −1 ↔ −2 ... −10 ↔ −11 ↔ −12 ↔ −14 ... −20 ↔ −25 ↔ −30 ↔ −40 ↔ −60 ↔ − ∞dB.
     − ∞dB: (infinity), the sound on the display cannot be produced.
   - Left/Right balance changes Front L/R , Rear L/R, and Front Enhance L/R at the same time.
   - Setting for each Surround mode is not possible.
   - The balance position is displayed on the lower right of the display tube with a bar graph.

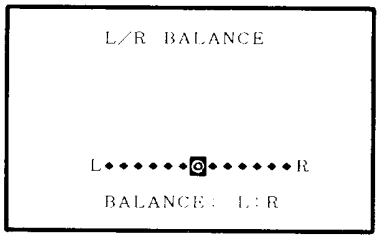
When operating with the CURSOR key on the screen



1. Press the ENTER/ESCAPE key to call up menu screen.
2. Press △ or ▽ CURSOR key to set it to L/R balance.

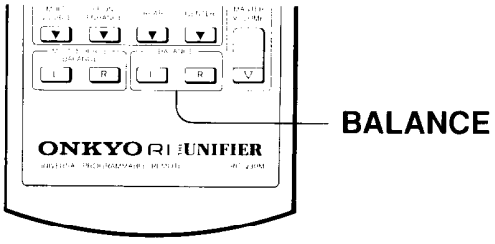


3. Press ENTER/ESCAPE key.
   - Open the screen for setting L/R balance control.
4. Press the ◁ or ▷ CURSOR key to adjust the left and right volume.
   - The value you are adjusting is displayed on the bottom of the screen.



5. Pressing ENTER/ESCAPE key will bring you the initial menu screen.

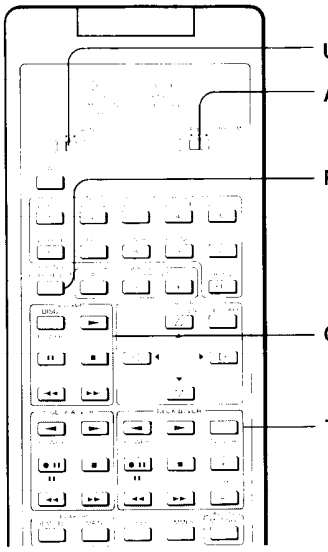
When operating with the BALANCE keys of the remote control unit.



   - Pressing L (Left) key decreases the right side volume and pressing the R (Right) key decreases the left side volume.
   - Level is displayed on the display tube and on the message display on the bar at the bottom of the screen.

Explanation of the remote control transmitter keys

Operations while using the RI remote control cable for connection with other ONKYO equipment
Set the USE/LEARN Selector switch to USE and the A/B/C (SUB ROOM) Selector switch to A or B.



■ **USE/LEARN Selector switch**
Set this switch to USE when operating. Set the switch to LEARN for memorizing other remote control codes.

■ **A (Audio)/B (Video)/C (SUB ROOM)/Selector switch (A/B/C (SUB ROOM))**

A (Audio): Set to this position to operate the ONKYO audio devices.

B (Video): Set to this position so that the unit will "learn" the remote control codes of a connected VDP, VCR, TV or other existing audio device, or operate those devices, refer "Learning remote control".

C (SUB ROOM): Set to this position to enjoy multi-source sound in another room. Refer to section "Multiple Room Remote System" on page 38 for details.

■ **Phono operation key (PLAY/REJECT)**
This key is used to operate the turntable. The phono operation key can be used only when the PHONO input selector key has been pressed. Each time the phono operation key is pressed, the remote control transmitter alternately emits the play or reject command. Refer to the turntable instruction manual for additional instructions on operating the turntable.

NOTE:

Before starting record play using remote control, confirm that there is a record on the platter. If there is no record, the stylus will be lowered to the platter, resulting in serious damage to the stylus.

■ **CD operation keys (CD)**
These keys are used to operate an ONKYO CD Player with the RI mark.

► : Press this key to play the CD Player.
❚❚ : Press this key to pause the CD play back. To resume disc play, press the PLAY key.
■ : Press this key to stop the CD Player.
⏮ : Press this key to go back to the beginning of the current track and again to skip back to the previous track.
⏭ : Press this key to skip to the next track.
DISC : Press to use for sequential selection of discs in the order they were loaded on the CD changer.

Refer to the CD Player instruction manual for additional information.

■ **Tape operation keys (DECK-A, DECK-B)**
These keys control ONKYO Double Cassette Tape Decks that can be remote controlled. Use the DECK-B keys to control single Cassette Tape Decks with the mark.

●/❚❚ : When this is pressed, the recording stand-by mode is entered.
◄ : The tape plays, moving from right to left, or, in the recording stand-by mode, recording begins.
■ : nterrupts all operations.
► : The tape plays, moving from left to right, or, in the recording stand-by mode, recording begins.
◄◄ : Fast forward from right to left.
►► : Fast forward from left to right

NOTES:

- The same remote control codes for the ONKYO audio device are set for the "B" position of the A/B/C Selector switch as those for the "A" position.
- For connections, please refer to the section "Connections for remote control."
- Consult your ONKYO service center for further details.

Audio/Video recording

Tape recording

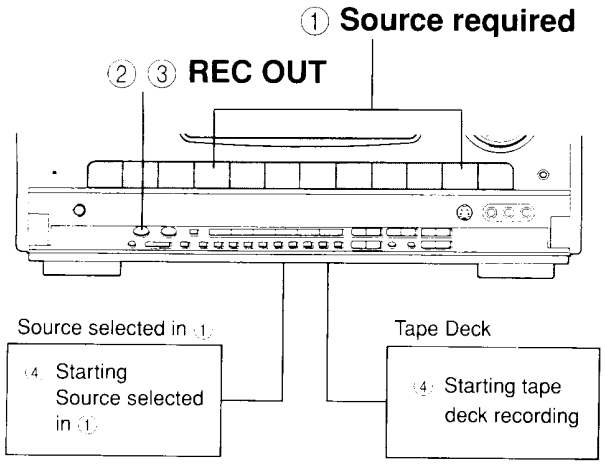
With the TX-SV909PRO you can perform recording while listening to the sound of another source through speakers or headphones. Make all connections between the Tape Deck and the unit as shown in the System connections diagram.

NOTE:

OPTICAL input of VIDEO-4 cannot be output to REC OUT terminal of TAPE 1,2, and VIDEO-1,2,3.
When recording VIDEO-4, connect to ANALOG input.

■ Recording and dubbing to a Tape Deck connected to TAPE-1

(When recording the source you are listening to)

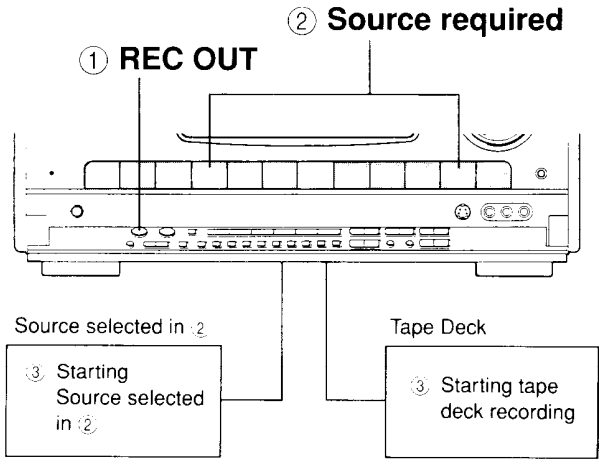


1. Press the input selector button to select the source to be recorded. (Other than TAPE-1)
2. Press the REC OUT button.
   - REC OUT on the display flashes for 8 seconds.
3. Press the REC OUT button again while the REC OUT indicator is flashing.
   - REC OUT and SOURCE will light, and the indication of the source selected by the input selector button will be marked with a red frame.
4. Start the device selected in step ①, while setting the Tape Deck connected to TAPE-1 to recording mode.
   - Set the proper recording level using the controls on the Tape Deck used for recording. Also, during recording and dubbing operations, never change the positions of any controls (bass, treble, etc.) on this unit.

NOTES:

- Pressing the input selector button during recording will change the source being recorded.
- When the TAPE-2 MONITOR indicator is on, only TAPE-2 can be recorded and if the input selector is changed, the red frame of TAPE-2 will not change.

(When recording a source different from the one you are listening to)

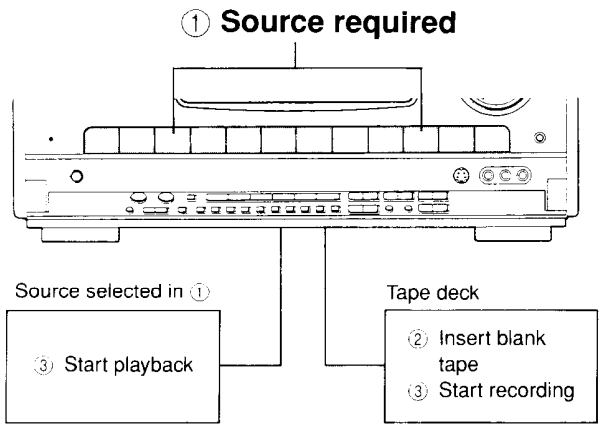


1. Press the REC OUT button.
   - REC OUT on the display will flash for 8 seconds.
2. Press the input selector button for the source to be recorded while the REC OUT indicator is flashing. (Other than TAPE-1)
   - REC OUT will light and the indication of the source selected will be marked with a red frame. This source will be output from the REC OUT jacks of TAPE-1, VIDEO-1 or VIDEO-2 or VIDEO 3.
     The source you are listening to does not change.
3. Start the source device selected in step ②, and start recording on the Tape Deck connected to TAPE-1.

NOTES:

- The source selected with the input selector will be output at REC OUT of VIDEO-1, 2, 3 in the Multi Source mode.
- When FM or AM has been selected on the tuner as described in step ② with the input selector being other than TUNER, the display will show the tuner indication for five seconds, and the preset station of the tuner can be selected during this period. When the input selecter is TUNER, the FM/AM bands are not switched even if the other (FM or AM) band is selected on the TUNER by the REC OUT button.

■ **Recording and dubbing to a Tape Deck connected to TAPE-2**



■ **Using the Graphic Equalizer**

- Connect the Graphic Equalizer to the TAPE-2 jacks on the rear panel.
- If a second Tape Deck is used, connect it to the tape jacks on the Graphic Equalizer. (see page. 6.)
  Press the TAPE-2 MONITOR button.Follow the Graphic Equalizer operating instructions.
  To record an equalized signal, use Tape Deck 2 (connected to the equalizer) for recording.

① Press the input selector button of the source to be recorded. (Other than TAPE-2)
② Set a blank tape in TAPE-2.
③ Start playing back the device selected in step ① , and start recording on TAPE-2.

- When the TAPE-2 MONITOR button is in the OFF position, the source signals can be monitored through the speakers or the headphones. If Tape Deck 2 has three heads, the just-recorded signals can be monitored (when the TAPE-2 MONITOR button is in the ON position). Refer to the Tape Deck instruction manuals for more details.
- Set the proper recording level using the controls on the Tape Deck used for recording. Also, during recording and dubbing operations, never change the positions of any controls (bass, treble, etc.) on this unit.

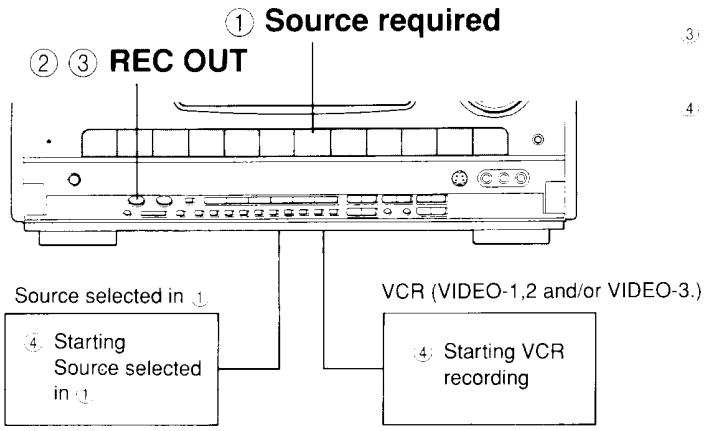
VCR recording

Data can be recorded from Video Disc Players, Video camcorders, and Video Cassette Recorders to Video Cassette recorders connected to VIDEO -1,-2, -3.
Connect the VCR to VIDEO-1 , VIDEO-2, and/or VIDEO-3.

NOTES:

- Do not change the REC selector setting while recording is in progress.
- Certain combinations of video input and output connections will allow sound recording, but not picture recording. Input via the normal video connector cannot be recorded via the S connector. Especially if the program to be recorded is important, take a few moments to double check the video connections. (See page 8)

(When recording the source being played back)

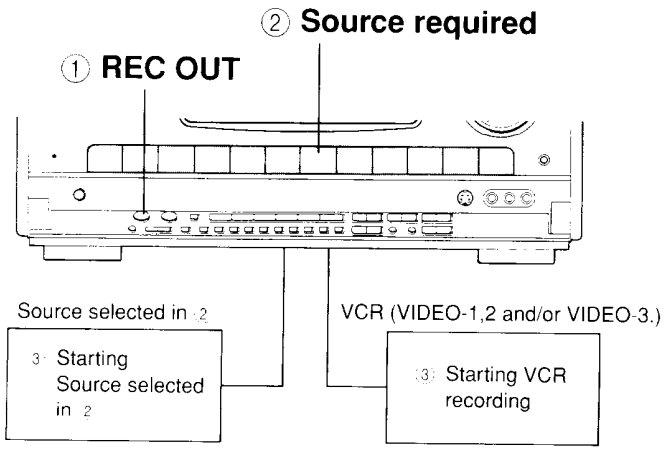


① Select the source to be recorded with the input selector button.
② Press the REC OUT button.

- [REC OUT] on the display will flash for 8 seconds.

③ Press the REC OUT button again while [REC OUT] is flashing. [REC OUT] and [SOURCE] will light and the source selected with the input selector will be marked with a red frame.
④ Start the source selected in step ① , and start recording the VCR connected to VIDEO-1, VIDEO-2 and/or VIDEO-3.

(When recording a source different from the one being played back)

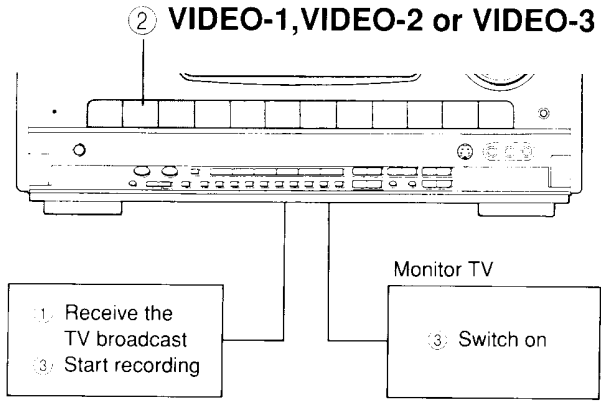


1. Press REC OUT button.
   - [REC OUT] on the display will flash for 8 seconds.
2. Press the input selector button of the source to be recorded while the [REC OUT] indicator is flashing.
   - [REC OUT] will light, and the source selected will be marked with a red frame.
3. Start the source selected in step 2, and start recording the VCR connected to VIDEO-1, VIDEO-2 and/or VIDEO-3.

NOTE:

The source selected with the input selector will be output at REC OUT of VIDEO-1, 2,3 in the Multi Source mode.

(When using a VCR with a built-in TV tuner)
It is possible to record a TV broadcast while watching it on the monitor. Perform connections as shown in the System Connections diagram (on page. 8).



1. Receive the desired TV broadcast using the VCR (VIDEO-1, VIDEO-2 or VIDEO-3).
2. Press the VIDEO-1, VIDEO-2 or VIDEO-3 input selector.
3. Put the VCR (VIDEO-1, VIDEO-2 or VIDEO-3) in the recording mode and switch on the monitor TV. During recording, the picture is sent to the monitor TV and sound to the speakers connected to the TX-SV909PRO.
4. Refer to the Video Cassette Recorder instruction manual for information concerning VCR-monitor TV and antenna connections.

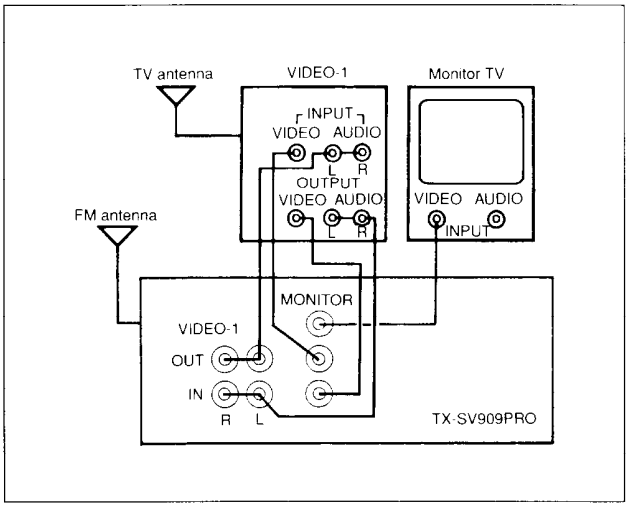
Playback and recording of TV picture and FM/CABLE TV sound

Recording of a TV broadcast and FM broadcast (simulcast) is possible when two VCRs are used.

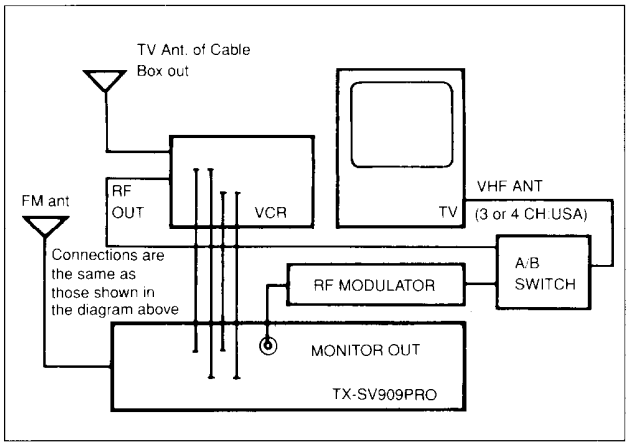
1. Receive the TV broadcast using the VCR (VIDEO-1) tuner.
2. Press the VIDEO-1 input selector.
3. Press the FM input selector and tune in the FM simulcast using a preset button or the tuning selectors. The picture will be sent to the monitor TV and the FM stereo sound to the speakers connected to the TX-SV909PRO.
4. To record the TV picture and FM sound, use VCR (VIDEO-2 or VIDEO-3). Receive the TV broadcast using VCR (VIDEO-1 or VIDEO-3) and begin recording of VCR (VIDEO-2 or VIDEO-3). The program can be monitored during recording.

Mixing video and audio for VCR recording

1. Press the Input Selector button to select the video equipment (VIDEO-1, 2, 3, 4, 5, 6) to be used when playing the video.
2. Press the REC/PAUSE button on the VCR (VIDEO-1, 2 or 3) that will be doing the recording.
3. Press the REC OUT button and Input Selector button (CD, PHONO, FM, AM, TAPE-1, TAPE-2) to select the audio source.
   - The picture will be left as is. Only the audio will be changed.
4. Start operation of the equipment.
   - The picture will be recorded from the video source, and the sound from the audio source.



– If the television has no video input terminal, make the connections as shown below:–



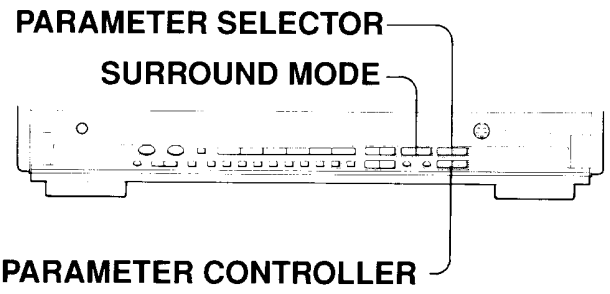
- The "A/B switch" may also be built-in the RF modulator.
- Use an unused television channel (channel 3 or 4 in the U.S.A. or output channel for the RF modulator in your country).

Basic operation of Surround play

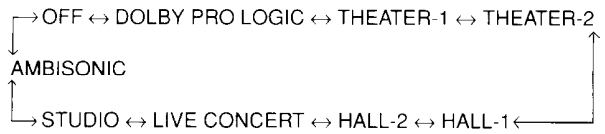
- Step 4 on page 17 should be followed by the following basic operations.

■ **Although details of each Surround mode will be explained on page 29, please be sure to understand the following basic operation first.**

When operating with the main unit:



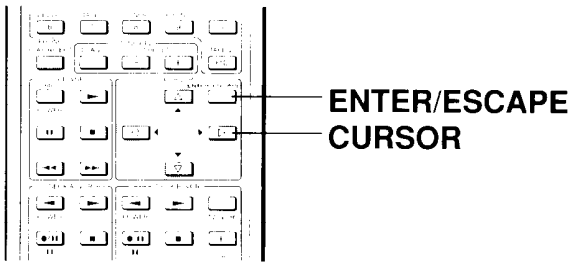
1 Press SURROUND MODE buttons (◄, ►) to select Surround mode.
- Each time the button is pushed the parameter changes as follows and is shown in the display section.



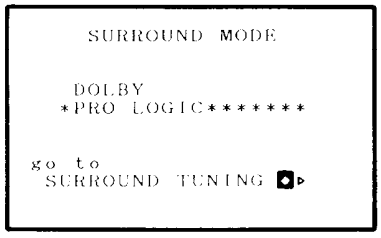
2. Press the PARAMETER SELECTOR buttons (◄, ►) to select the parameter you want to change.
- Displayed in the display section for 8 seconds.
- When the display goes out, press the PARAMETER SELECTOR button again.
- Parameter changes depending on the Surround mode. Refer to the table on page 42.

3. Use the PARAMETER CONTROLLER buttons (◄, ►) to select a mode and value.
- Adjust the parameter by repeating 2 and 3 referring to the Parameter Selector list.
- The adjusted parameter is stored in the memory for each Surround mode.
- Use the SURROUND MODE buttons to select OFF (BYPASS) when you are not playing in Surround.

When operating with the CURSOR on the screen

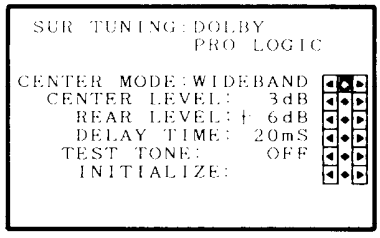


1. Press the ENTER/ESCAPE key to call menu screen.
2. Press △ or ▽ CURSOR keys to set the cursor to Surround mode.
3. Press the ENTER/ESCAPE key.
- The screen for selecting Surround mode will open.



4. Press ◁ or ▷ CURSOR key to select Surround mode.
- If you have selected the Surround mode before, the SURROUND MODE screen will open.

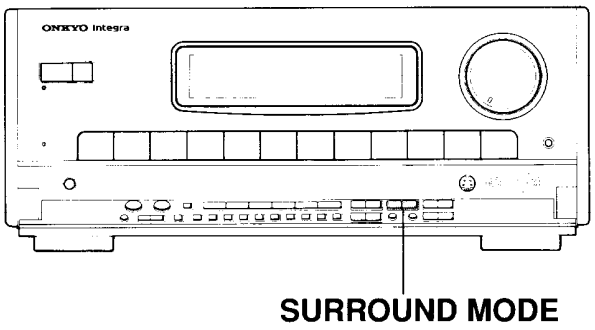
5. Press ▽ CURSOR key in order to place it at the "go to SURROUND TUNING" and press ▷ CURSOR key.
- The small SURROUND TUNING screen, selected from the Surround mode, will open.
- The screen can also be opened by selecting SURROUND TUNING in the menu screen.

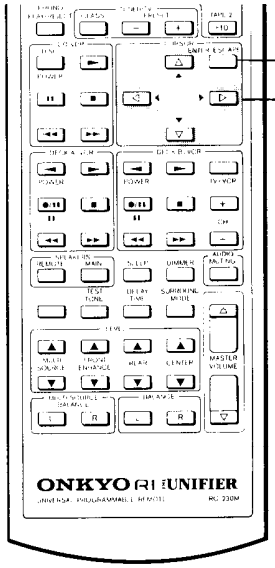


6. Press △ or ▽ CURSOR key to select the item you want to change. Press ◁ or ▷ CURSOR key to change mode and value.
- Some items allow you to select values visually by looking at the small screen.

Use of Surround mode

- This unit is provided with 8 kinds of Surround modes.
  Select a mode by pressing the SURROUND MODE button in accordance with the media used, for example the same sound field as you would experience in a theater, or the same powerful sound as you would enjoy in a concert hall, etc.





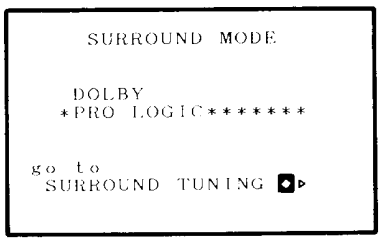
■ Surround mode

- **DOLBY PRO LOGIC**
  This is suitable for playback of video tapes or LDs recorded with the Dolby Surround system. You can experience the same kind of powerful image as you would in the theater.
- **THEATER-1,2**
  There are many Rear speakers in an actual theater. Use this mode for creating a theater atmosphere.
  THEATER-1 simulates an atmosphere of a small theater and THEATER-2 simulates that of a big theater.
  They are suitable for playback of media recorded with the Dolby Surround system.
- **HALL-1,2**
  This mode is suitable for media with a substantial amount of reverb sound such as classical music.
  HALL-1 simulates the atmosphere of a small concert hall, and HALL-2 simulates that of a big concert hall.
- **LIVE CONCERT**
  This mode is suitable for media (CD, LD) with live recorded music.
- **STUDIO**
  This mode is suitable for media (studio recording) with few reverb sounds such as pop and jazz.
- **AMBISONIC**
  This mode is suitable for playback of media recorded with the AMBISONIC system.
  The same sound field as you obtained from the microphone position when you recorded can be reproduced. The sound is produced from Left and Right, Front and Rear speakers.
- **OFF**
  This is the mode used when Surround mode is not used. The sound input (L, R) is output from the Front speakers directly.

The mode can be changed with the remote control by using the SURROUND MODE key. Use this key in conjunction with the sound source being reproduced. This will rotate one step at a time through the each time this key is pressed.

When operating with the CURSOR key on the screen

1. Press the ENTER/ESCAPE key to call the menu screen.
2. Presss △ or ▽ CURSOR key to set it to "SURROUND MODE".
3. Press the ENTER/ESCAPE key.
   - The screen for selecting Surround mode will open.

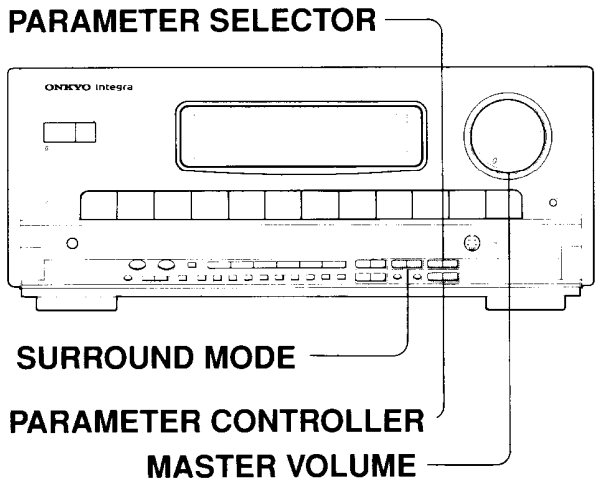


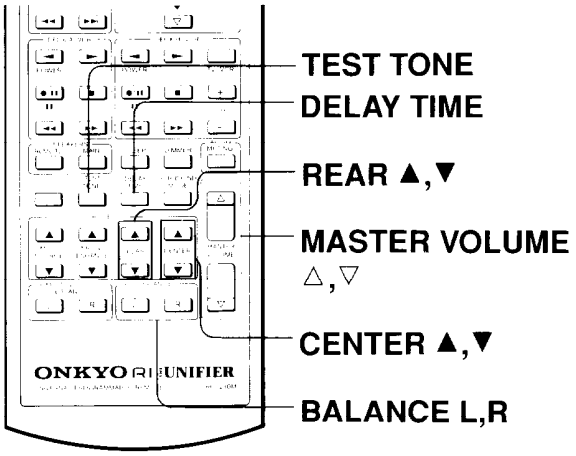
4. Press ◁ or ▷ CURSOR key to change the Surround mode.
- Presss ▽ CURSOR key to select "go to SURROUND TUNING". Pressing the ▷ CURSOR key will open a small SURROUND TUNING screen for the selected Surround mode.
5. Pressing the ENTER/ESCAPE key when the cursor is placed at Surround mode. will return you to the menu screen.

Adjusting the Dolby Pro Logic Surround

When using video cassette tapes or video discs with the Dolby Stereo or Dolby Surround trademark, you can achieve the same kind of sound in your room that can be exprerienced in a moviethеater.

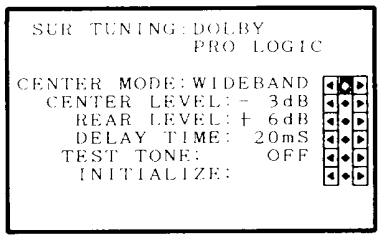
- Refer to page 28 for the basic operations.





1. Select a source encoded with Dolby Surround.
2. Use the SURROUND MODE buttons (◄, ►) to select the Dolby Pro Logic Surround mode.
3. Use the PARAMETER SELECTOR buttons (◄, ►) to select CENTER mode. (Explanation-1)
4. Use the PARAMETER CONTROLLER buttons (◄, ►) to select either NORMAL, WIDEBAND or PHANTOM.

■ When selecting with the CURSOR key on the screen



- Bring the cursor to the CENTER MODE with ◁ or ▷CURSOR key and make a selection with ◁ or ▷CURSOR key.

5. Next, use the MASTER VOLUME to set the volume to the desired listening position.
6. Turn the TEST TONE on. (Explanation-2)
   Use the TEST TONE key on the remote control unit or the CURSOR key on the screen to operate.
7. Adjust Center Level, Rear Level, and L/R Balance. (Explanation - 2)
   - The adjustment can be made with the PARAMETER SELECTOR buttons and PARAMETER CONTROLLER buttons on the main unit, or the CURSOR key on the screen. However, it is most convenient to use the CENTER ▲ and ▼, REAR ▲ and ▼ and BALANCE L, R keys on the remote control unit.

NOTE:

When the Test Tone is set to AUTO, the Parameter Selector does not operate. It can only be adjusted with the remote control transmitter.

8. Turn off the TEST TONE.
9. Adjust the DELAY TIME. (Explanation -3)
   - The adjustment can be made in 1 msec intervals between 15 and 30 msec.
10. Carry out INITIALIZE to initialize the set value for each level. (Explanation-4)

NOTE:

Each volume level other than L/R Balance can be adjusted for each Surround mode.

Explanation-1

- **CENTER MODE**

The main Dolby Pro Logic Surround functions are sent through the center channel. Because of this three modes must be available from the speaker used by the center channel.

1. NORMAL: When small speakers are used on the center channel, signals of 100 Hz or more are output, and signals of 100 Hz or less are split between the front L and R channels.
2. WIDEBAND: When the front L and R channels are using similar speakers for the center channel, it operates throughout the full frequency range.
3. PHANTOM: When no Center speaker is used, the center channel signal is split between the front L and R speakers, producing similar results to that of a Center speaker.

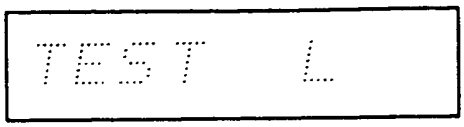
Explanation-2

- **Adjustment of TEST TONE function, Center, Rear levels and L/R balance**

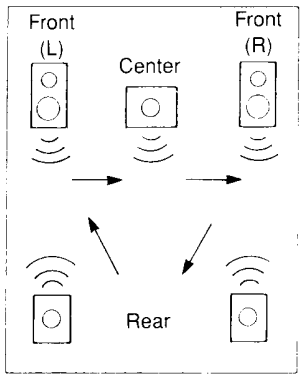
Adjustment of TEST TONE

No matter what kind of program sources are used, the Front, Rear and Center speakers should be set to the same volume level to enjoy the Surround effect. TEST TONE should be used to make this adjustment. Pink noise is produced to match the volume levels used by the Front, Center and Rear speakers. It is effective for operating with the remote control unit from the position where you are listening to the sounds.

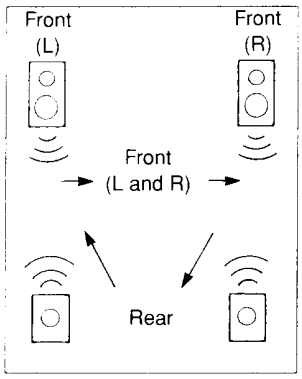
When operating with the TEST TONE key on the remote control unit



- TEST TONE is output in the following order for 2 seconds each: Front Left (TEST L) → Center (TEST C) → Front Right (TEST R) → Rear(s) (TEST S) →. Use the CENTER ▲ and ▼ , REAR ▲ and ▼ and BALANCE L/R buttons from the listening positioning to adjust for equal test tone volume on each channel.
- When CENTER MODE is PHANTOM, the output is in the following order: Front Left (TEST L) → Front Left and Right (TEST LR) → Front Right (TEST R) → Rear(s) (TEST s) →.
- After 2 minutes, the output turns off.



Test tone sequence in normal and wideband modes



Test tone sequence in phantom mode

When operating with the CURSOR key on the screen

- Place the cursor at the TEST TONE on the Surround Tuning screen. Each time ◁ or ▷ CURSOR key is pressed changes are made as follows: OFF ↔ LEFT ↔ CENTER ↔ RIGHT ↔ S(REAR) ↔ AUTO ↔.
- When set to LEFT, CENTER, RIGHT or S (REAR), the TEST TONE is output from each channel successively.
- When set to AUTO, the same performance is achieved as when operating the TEST TONE key with the remote control unit.

Adjustment of CENTER LEVEL and REAR LEVEL

When operating with the main unit

1. Use ◄ or ► button of PARAMETER SELECTOR to select items.
   - The selected item is displayed on the display tube, the letters scroll and the current set value is displayed for 8 seconds.

2. Press ◄ or ► button of PARAMETER CONTROLLER to adjust the level.
   - The adjustment can be made from -∞dB (minimum) -60, -40, -30, -25, -20, -18, ---- -10, --- 0, +1, +2, ---- up to +12dB (maximum).

When operating with the CURSOR on the screen

Use the △ or ▽ CURSOR key to select items on the Surround Turning screen and adjust the level with ◁ or ▷ keys.

When operating with the Center ▲ and ▼, REAR ▲ and ▼ keys on the remote control unit

Adjust with ▲ and ▼ keys.

The level is displayed in numerical values on the display tube of the main unit and Surround Tuning screen. It is also displayed on the Onscreen message display at the bar on the bottom of the screen.

L/R balance adjustment

The adjustment should be made with the PARAMETER SELECTOR and the PARAMETER CONTROLLER buttons of the main unit, the CURSOR keys on the screen, or the BALANCE keys on the remote control unit (Refer to page 22 for details.)

NOTES:

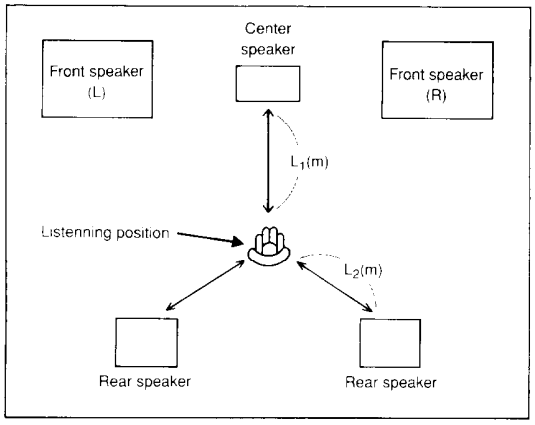
- When TEST TONE is on and if you press the buttons on the main unit or keys on the remote control unit, other than Master Volume, Center Level, Rear Level, L/R Balance, Tone Control, Speakers Main, Audio-Muting and Test Tone, the TEST TONE turns off.
- When the Test Tone is set to AUTO, the Parameter selector on the main unit does not operate. It can be adjusted by the remote control transmitter.

Explanation-3

- **Delay Time**

By adjusting the delay time, and carefully adjusting Master Volume Level, Center Volume Level and Rear Volume Level, the apparent acoustic size of your listening room can be enlarged or reduced. Adjustable delay time allows you to tailor the acoustic size of your listening environment to the sonic characteristics of the audio program.

Dolby Surround delay time is specified at 20 mSEC. It is recommended that initial Dolby Surround delay be set at 20 msec, and adjustment from 15 to 30 is possible.



Refer to the figure above for standard setting.

L1 – L2 = 1: 15 to 23msec
L1 – L2 = 2: 16 to 26msec
L1 – L2 = 3: 19 to 29msec
L1 – L2 = 4: 22 to 30msec
L1 – L2 = 5: 25 to 30msec

When operating with the main unit

3. Use the PARAMETER SELECTOR ◄ and ► buttons to select DELAY.
   - The current set value, "DELAY 20" msec for example, is displayed for 8 seconds on the display tube.
4. Use PARAMETER CONTROLLER ◄ and ► buttons to adjust Delay Time.
   - ┌→15↔16←·····→29↔30←┐mSEC

mSEC

When operating with the CURSOR key on the screen

Select DELAY TIME on the SURROUND TUNING screen and make an adjustment with ◁ or ▷ CURSOR keys.

When operating with the DELAY TIME key on the remote control unit

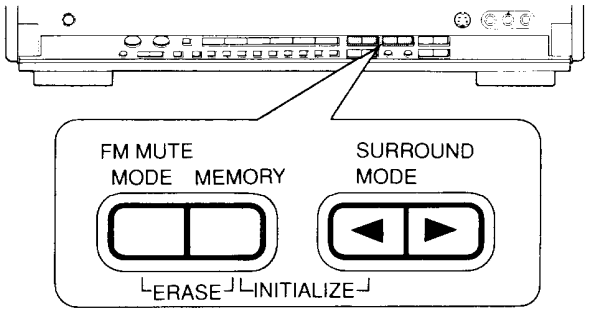
The value is increased each time the DELAY TIME key is pushed.

- ┌→15→16→·····→29→30→┐mSEC

Explanation-4

- **initialization**
- When the initialization is conducted, each level is initialized as follows.
  CENTER MODE = NORMAL
  CENTER LEVEL = 0 dB
  REAR LEVEL = 0 dB
  DELAY TIME = 20 mSEC
  TONE CONTROL = 0

When operating with the main unit



- Press SURROUND MODE ◄ while holding down the MEMORY button.

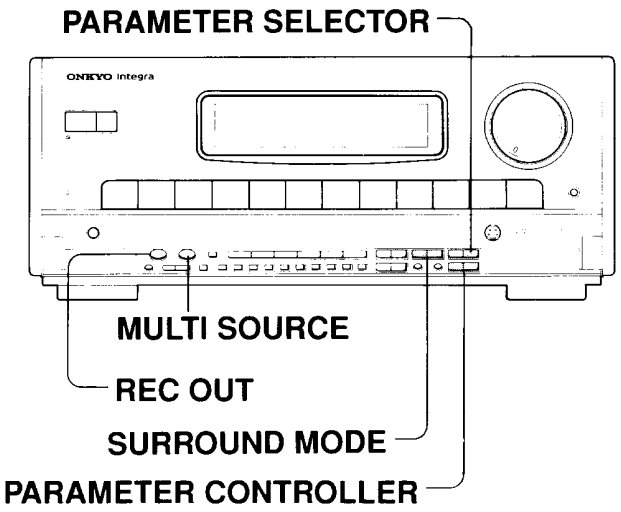
When operating with the CURSOR key on the screen

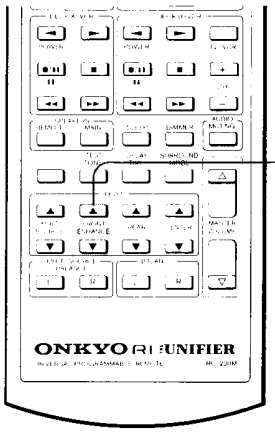
1. Bring the cursor to INITIALIZE with ◁ or ▷ CURSOR keys on the SURROUND TUNING screen.
2. Press ▷ CURSOR key
   - Yes? is displayed.
3. Pressing ▷ CURSOR key again enables initialization.
   - It is initialized when shipped.

Adjusting the Theater Surround

When using video cassette tapes or video discs that have the Dolby Stereo or Dolby Surround trademark, you can achieve the same kind of sound in your room that you experience in a movie theater by adding DSP's sound field effect.
(DSP: Digital Signal Processor --- refer to page 3 for details.)

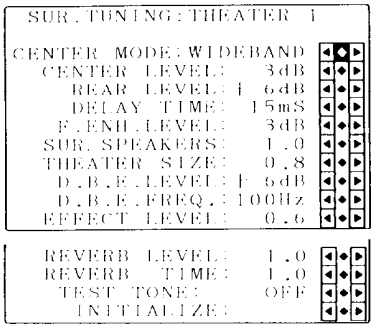
- Refer to page 28 for the basic operation.





1. Use the SURROUND MODE (◄, ►) buttons to select the THEATER-1 or THEATER-2 mode.
2. Use the PARAMETER SELECTOR (◄, ►) buttons to select ENHANCE SPEAKERS SET.
3. When the Front Enhance speakers are installed, use the PARAMETER CONTROLLER (◄, ►) buttons to turn it on.
   - ON/OFF setting for the Front Enhance speakers set cannot be turned on or off when one of the surround modes has been selected.
   - When the Front Enhance speaker is not installed, turn it off. The Front enhance signal is mixed with the Front L/R speakers at this time. The Front Enhance speaker level cannot be adjusted.
   - When the Multi Source is on, the FRONT ENHANCE SPEAKERS SET turns off.When the FRONT ENHANCE SPEAKERS are turned on, the unit should be set to the REC OUT mode, with the MULTI SOURCE function turned off.
4. Use the PARAMETER SELECTOR (◄, ►) buttons to select the CENTER mode and use the PARAMETER CONTROLLER (◄, ►) buttons to select either NORMAL , WIDEBAND, or PHANTOM.

■ When selecting with the CURSOR key on the screen



- The complete contents cannot be displayed on the screen at one time, but the △ or ▽ CURSOR keys can be used to scroll the display.

5. Next, use the MASTER VOLUME to set the volume to the desired listening position.
6. Turn the TEST TONE on.
   - In order to operate use the TEST TONE key on the remote control unit or the CURSOR key on the screen.
7. Adjust Center Level, Rear Level, and L/R Balance.
8. Turn the TEST TONE off.
9. Adjust the Tone Control.
10. Adjust the DELAY TIME.
11. The Front Enhance level is adjusted by default to 0dB. If you set it to " +", the enhanced volume on the front side increases.
    - This adjustment can be made with the PARAMETER SELECTOR (◄, ►) buttons and PARAMETER CONTROLLER (◄, ►) buttons or the CURSOR key on the screen. The FRONT ENHANCE LEVEL (◄, ►) keys on the remote control transmitter can also be used for adjustment.
    - It is not displayed when the Enhance Speakers Set is off.
12. Select the simulate position of the Surround Speakers (SUR. SPEAKERS). (Explanation-1) (Refer to page 34)
13. Select Theater SIZE. (Explanation-2) (Refer to page 34)
14. Adjust the DIGITAL BASS ENHANCER (D.B.E) LEVEL. (Explanation-3) (Refer to page 34)
15. Adjust the DIGITAL BASS ENHANCER (D.B.E) FREQUENCY. (Explanation-3) (Refer to page 35)
16. Adjust the EFFECT LEVEL. (Explanation-4) (Refer to page 35)
17. Adjust the REVERB LEVEL. (Explanation -5) (Refer to page 35)
18. Adjust the REVERB TIME. (Explanation-5) (Refer to page 35)
19. To initialize the set value of each level, carry out INITIALIZE. (Explanation -6) (Refer to page 35)
20. Pressing the ENTER/ESCAPE key on the remote control unit brings you the menu screen.

- Refer to explanation 1, 2, and 3 on pages 30, 31 and 32 for the operations from 4 to 10.
- As for operations 12 to 18, the D.S.P. effect differs depending on the size and shape of the room, the wall covering and in some cases, the way the speakers are installed.
- Switching Enhance Speakers Set on and off changes the D.S.P. effect slightly.

NOTE:

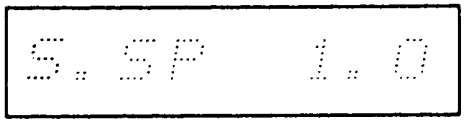
When THEATER mode is selected and the Front Enhance speakers are installed, the Front Enhance level is necessary to be readjusted every time after turning the TEST TONE off, because Front Enhance sound might be muted by operating TEST TONE.

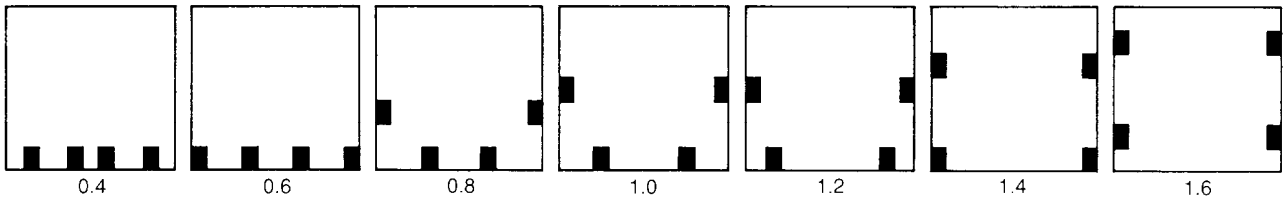
Explanation-1

- **Surround speakers**

■ **When THEATER-1 is selected**

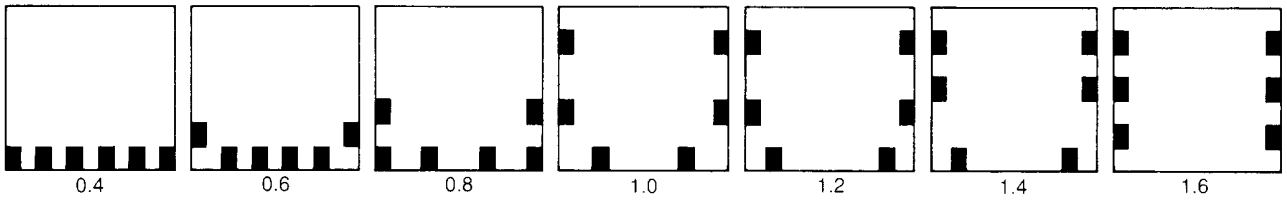
Simulates as if there were four Surround speakers.
7 patterns from 0.4 to 1.6 can be selected.





■ **When THEATER-2 is selected**

Simulates as if there were six Surround speakers.
7 patterns from 0.4 to 1.6 can be selected.

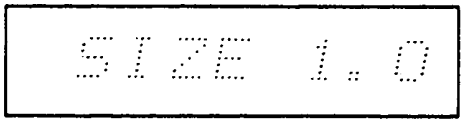


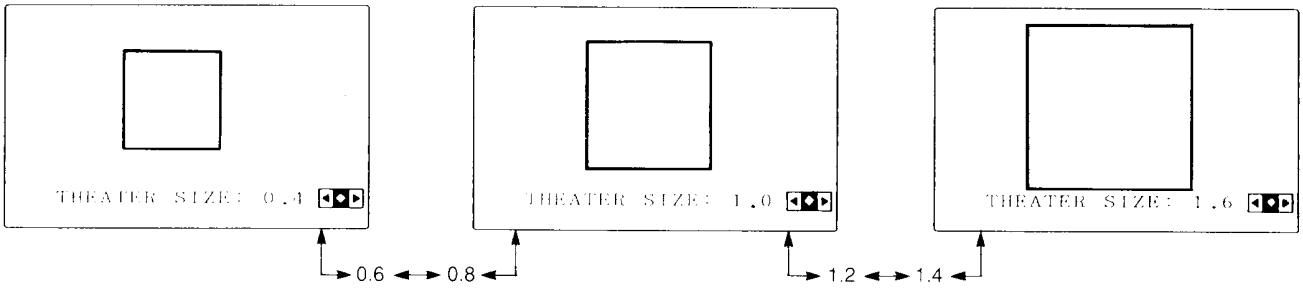
- The Surround speakers mentioned here are referred to as Rear speakers, not the speakers connected to the main unit.

Explanation-2

- **Theater size**

Simulates the atmosphere of a large or small sized movie theater.
With both THEATER-1 and 2, 7 patterns from 0.4 to 1.6 can be selected.

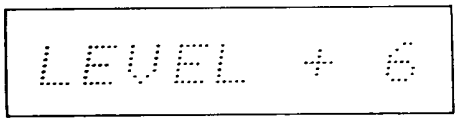




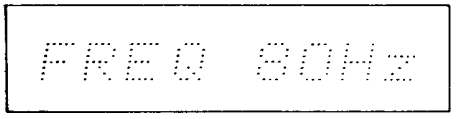
Explanation -3

- **Digital Bass Enhancer (D.B.E) level and frequency**
  Simulates the effect of the subwoofer. To increase the low sound effect, increase the D.B.E. level. It changes as follows: OFF → 2 → 4 → 6 dB.
  To change the peak frequency of D.B.E., adjust D.B.E. frequency. Select either 40, 60, 80, 100, 125 or 160 Hz.

Scroll through the values.



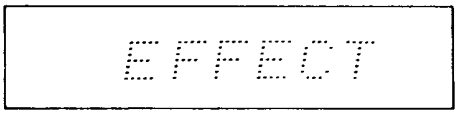
- The display stops when the set value is displayed.



- The display stops when the set value is displayed.

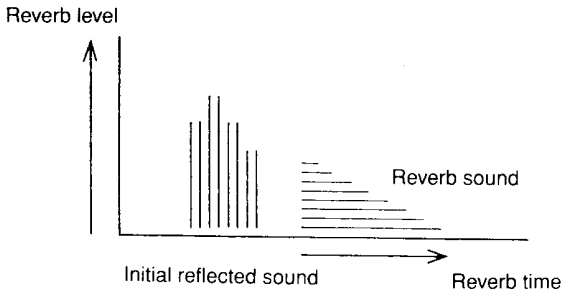
Explanation-4

- **Effect level**
  This is the parameter to adjust the level of the initial reflected sound and the reverb sound, which are added to the direct sound, simultaneously.
  7 patterns from 0.4 to 1.6 can be selected.



Scroll through the values.

- The display stops when the set value is displayed.

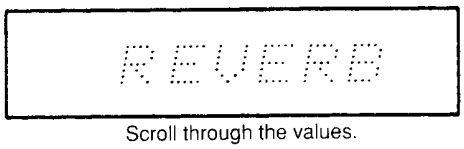


Explanation-5

- **Reverb level and time**
  This is the parameter to adjust the size of the reverb sound and reverb time in response to the initial reflected sound.
  7 patterns from 0.4 to 1.6 can be selected.

Scroll through the values.

- The display stops when the set value is displayed.



Scroll through the values.

- The display stops when the set value is displayed.

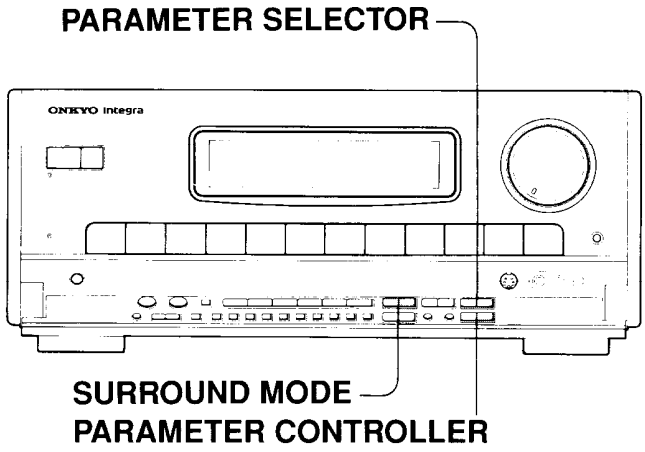
Explanation-6

Initialization will result in the following initial settings.

CENTER MODE = NORMAL
CENTER LEVEL = 0 dB
REAR LEVEL = 0 dB
DELAY TIME = 20 mSEC
FRONT ENHANCE LEVEL = 0 dB
SURROUND SPERKERS = 1.0
THEATER SIZE = 1.0
DIGITAL BASS ENHANCER LEVEL = OFF
DIGITAL BASS ENHANCER FREQUENCY = 100 Hz
EFFECT LEVEL = 1.0
REVERB LEVEL = 1.0
REVERB TIME = 1.0
TONE CONTROL = 0

Adjusting the Hall, Live Concert, Studio Surround

Center speaker is not required in these Surround modes.
Refer to page 28 for the basic operation.

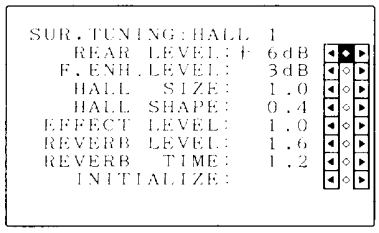


1. Use SURROUND MODE (◄,►) buttons to select either HALL-1, HALL-2, LIVE CONCERT, or STUDIO.
2. Use the PARAMETER SELECTOR (◄,►) buttons to select ENHANCE SPEAKERS SET.
3. When the front eenhance speakers are installed, use the PARAMETER CONTROLLER (◄,►) buttons to turn it on.
   - ON/OFF setting for the Front Enhance speakers set cannot be turned on or off when one of the surround modes has been selected.
   - If the front enhance speakers are not installed, turn it off. The front enhance signal is mixed with the front L/R speakers at this time. The Front Enhance speaker level cannot be adjusted.
   - When Multi Source is on, FRONT ENHANCE SPEAKERS SET is turned off.

NOTE:

- The TEST TONE function is not provided with these Surround modes.

■ When selecting with the CURSOR key on the screen.



4. Next, use the MASTER VOLUME to set the volume to the desired listening position.
5. .Adjust the balance of front enhance speaker level and Rear Speaker level while playing back the stereo source.
6. Select HALL SIZE.
   Selecting this simulates the music generated in a large or small theater. 7 pattens from 0.4 to 1.6 can be selected for each mode.
   Refer to page 34 "Explanation-2 Theater Size".
7. Select HALL SHAPE. (Explanation-1)
8. Adjust EFFECT LEVEL.
   Refer to "Explanation-4 Effect Level" on page 35.
9. Adjust REVERB LEVEL.
   Refer to "Explanation-5 Reverb Level and Time" on page 35.
10. Adjust REVERB TIME.
    Refer to "Explanation-5 Reverb Level and Time" on page 35.
11. To initialize the set value of each level, carry out INITIALIZE.
    - Initialization in HALL-1, HALL-2, LIVE CONCERT, and STUDIO modes will result in the following initialized values.

    REAR LEVEL = 0 dB
    FRONT ENHANE LEVEL = 0 dB
    HALL SIZE = 1.0
    HALL SHAPE = 1.0
    EFFECT LEVEL = 1.0
    REVERB LEVEL = 1.0
    REVERB TIME = 1.0
    TONE CONTROL = 0
12. Pressing ENTER/ESCAPE key brings you to the menu screen

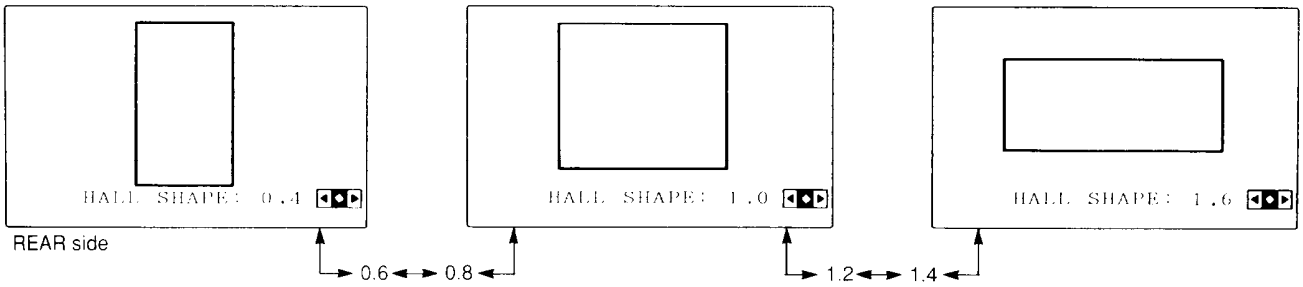
    - Make the adjustments after initializing first, by referring to item 11 on this page.

Explanation-1

- **Hall shape**

Simulates the shape of the theater. 7 patterns from 0.4 to 1.6 can be selected.
0.4 to 0.8 simulate rectangular shapes, 1.0 simulates a square shape and 1.2 to 1.6 simulate oblong shapes.

FRONT side

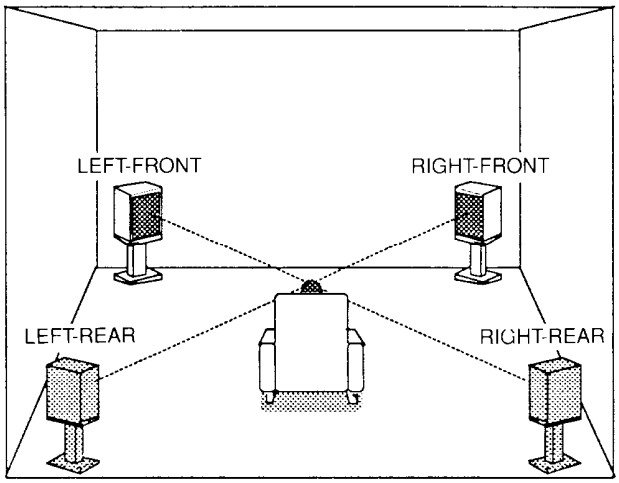


Adjusting the Ambisonic Surround

AMBISONIC system

Ambisonic is a Surround system licensed from Nimbus Records Limited. It features natural and straightforward sound field reproduction.

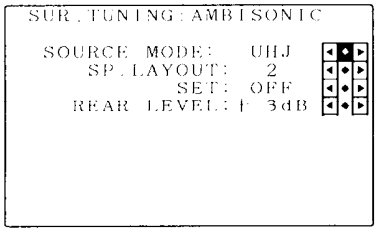
Ambisonic recording uses an one-point microphone consisting of a total of three microphones in total: one non-directional microphone and two bi-directional microphones. Sound is recorded from 360 degrees in every direction. The signal obtained by this special microphone is encoded to 2 channels and recorded to a medium such as a CD. This is converted to 4 channels to play back from four speakers: front left, front right , rear right and rear left. The sound field obtained during recording can be accurately reproduced. The center speaker is not required. As the Front Right and Left speakers, Rear Right and Left speakers, Left Front and Rear speakers, and Right Front and Rear speakers have a stereo relationship respectively, sound is linked smoothly and there is no sense of incompatibility to whichever direction the sound images are shifted. It is suitable as a source for stereo recording. Dolby Pro Logic Surround is suitable for movie media while Ambisonic Surround is suitable for music media.



Refer to page 28 for the basic operation.

1. Set the Surround mode to AMBISONIC.

■ **When selecting with the CURSOR key on the screen.**

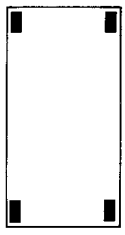


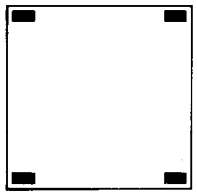
2. Select source mode.
   When playing back media recorded with the Ambisonic system, select "UHJ" and when playing back media recorded in stereo, select "STEREO".
3. Select speakers layout.
   (Explanation-1)
4. Next, use the MASTER VOLUME to set the volume to the desired listening position.
5. Adjust Rear Level and the balance of L/R Speakers .
   (Explanation-2)
6. Adjust STEREO ENHANCE when the Source mode is STEREO.
   (Explanation-3)
7. Pressing ENTER/ESCAPE key will bring you the menu screen.

Explanation-1

- **Speakers layout**

The placement of the Front, Rear, Left and Right speakers may be in a rectangular layout instead of a square one due to the shape of the room. In such a case, select a shape which is close to the actual speaker layout.


Layout-1


Layout-2


Layout-3

Explanation-2

- **Rear level, Balance adjustment of L/R speakers, and "SET" function**

SET functions can be operated on the screen only.

To adjust Rear level and balance of L/R speakers, use SET on the screen. In that case, set SET to ON and play back the media, then the same signals are output from the four speakers. Adjust rear Level and L/R balance so that the sound from each speaker can be heard at the same volume from the listening position.

Explanation-3

- **Stereo enhance adjustment**

When Source mode is set to STEREO, adjust the effect amount of Surround.

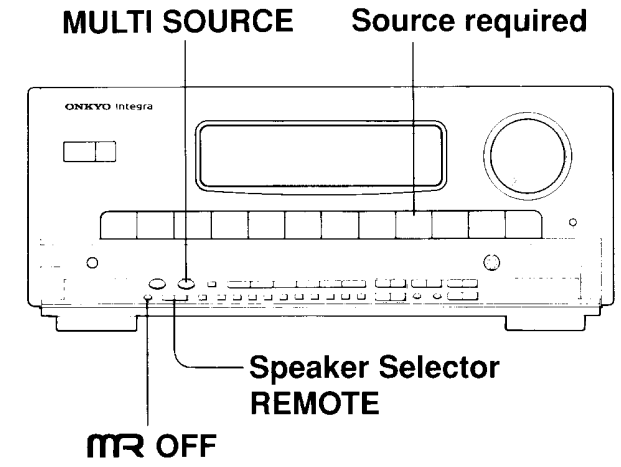
As the value increases the Surround feeling increases, while as the value decreases it becomes close to monoral. Adjust it in accordance with the amount of reverb element included in the source and the type of the source. It can be set between 0 and 10.

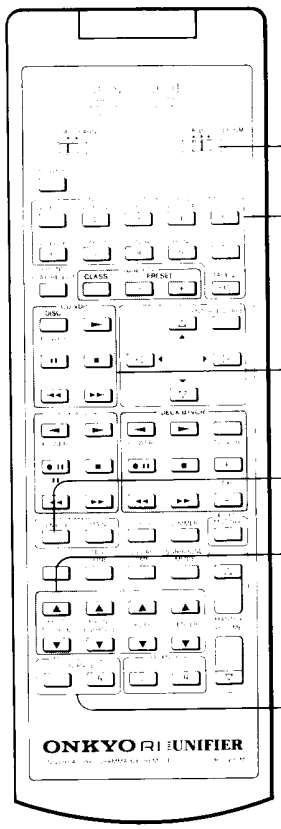
Listening to devices connected to the TX-SV909PRO in another room

Multiple Room Remote System (MR)

Please refer pages 10 and 11 for connection and set-up methods.

- TX-SV909PRO allows you to listen to the desired performance in another room (sub room) while listening to the playback of a device located in the main room. To do this, connect the speakers in another room to the FRONT SPEAKERS REMOTE terminals on the TX-SV909PRO.
- Remote control from another room can be done by employing the ONKYO multiple room remote system (RI). Refer to the connections for multiple room remote control. Be sure to operate the remote control unit directing to the remote sensor unit HR-10.
- The following steps (except step 1) can be performed using the remote control unit. It is recommended that the adjustments described below be done in the main room in advance, since it is not possible to operate the remote control unit in another room while watching the display of the TX-SV909PRO.
- When using the included remote control unit (RC-230M), set A, B, C Selector switch to C (SUB ROOM). Only the functions related to the Multiple Room Remote system are output.





Make sure that recording is not being carried out before setting the TX-SV909PRO.

1. Turn the MR OFF button OFF (MR indicator is turned off.)
2. Press the MULTI SOURCE button.
   - 〈REC OUT〉 indicator will be turned off and the 〈MULTI SOURCE〉 indicator will flash for 8 seconds.
3. While this is flashing, use the input selector button to select the desired source.
   - 〈MULTI SOURCE〉 will light and the selected source will be marked with a red frame.
     When VIDEO-4 is set for optical input, it cannot be output to MULTI SOURCE. Instead, it should be set for analog input.
   - At this time, the display will show the tuner indications for 5 seconds and between the scanning of the CLASSIFIED SCAN programs if the tuner has been selected. PRESET station of the tuner can be selected during this indications.
   - Pressing INPUT/SOURCE SELECTOR key on C side of the remote control unit automatically switches from item 2 to 3.
4. Adjust the level using the MULTI SOURCE LEVEL ▼/▲ keys of the remote control transmitter.
   - The level will be indicated on the display. It is recommended that the level be set lower in advance in the main room (-76 to -75dB).
5. Use the MULTI SOURCE BALANCE L/R keys of the remote control unit to adjust L/R Balance with Sub room.
   - Pressing L (left) key decreases Right output and pressing R (right) key decreases Left output. Damped amount of the channel with the decreased output is displayed in the display tube. When it is CENTER L/R indicates 0dbB.
6. Press the REMOTE button of the SPEAKERS to illuminate the 〈REMOTE〉 indicator.
- Press the MAIN button to turn off the 〈MAIN〉 ; indicator if you are not listening the sound in the main room.

NOTES:

- When Front Enhance Speakers are working (FRONT ENHANCE SPEAKERS SET is ON) during Surround play in Main room, Multi Source is turned off.
- The same source as that indicated by the input selector will be output for the REC OUT of the TAPE-1,2, VIDEO-1, 2, 3 if the MULTI SOURCE is controlled.
- Press the REC OUT button to change the MULTI SOURCE mode to the REC OUT selector modes.

■ **MR Off button (MR OFF) and Indicator**
This is used to disable control of the ONKYO MR system via the remote control unit in another room. Pressing this button will illuminate the indicator, and control from another room will be disabled. Pressing the button again will turn the indicator off, and control from another room will be enabled.

NOTES:

- If the Multi Source is selected, the MR OFF will be off.
- If the Multi Source is selected for REC OUT and when Front Enhance speakers are working (FRONT ENHANCE SPEAKERS SET is ON) in Surround mode and when TEST TONE is ON the MR OFF will be on.

■ You can use the remote control transmitter supplied with this Tuner Amplifier to operate the source devices selected for the Multi Source if they are an ONKYO CD or Cassette Deck bearing the RI mark.

■ There is a remote control unit RC-MR1H for the Sub room, which is sold separately. (RC-MR1H does not have VIDEO-5,6 of Input Selector.)

■ Installment of the remote sensor unit HR-10 and the Remote Emitter unit HE-50(AC) is required to control non-ONKYO devices from another (sub room). Operate the remote control unit included with the device by directing the control unit toward the HR-10 installed in another room (sub room).

- IF A PROBLEM OCCURS, use the TX-SV909PRO's front panel controls to verify that the problem is with the remote controller. If there is no problem when operating the TX-SV909PRO directly, check the batteries in the remote controller first before assuming that there is a controller malfunciton.

NOTES:

- The source may be changed or recording being done on the TX-SV909PRO may be interrupted when operations are done in the another room.Press the MR Off Button to disable the control from another room. (The MR indicator will be illuminated.)
- Some non-ONKYO remote control transmitters cannot be used.

Learning remote control codes

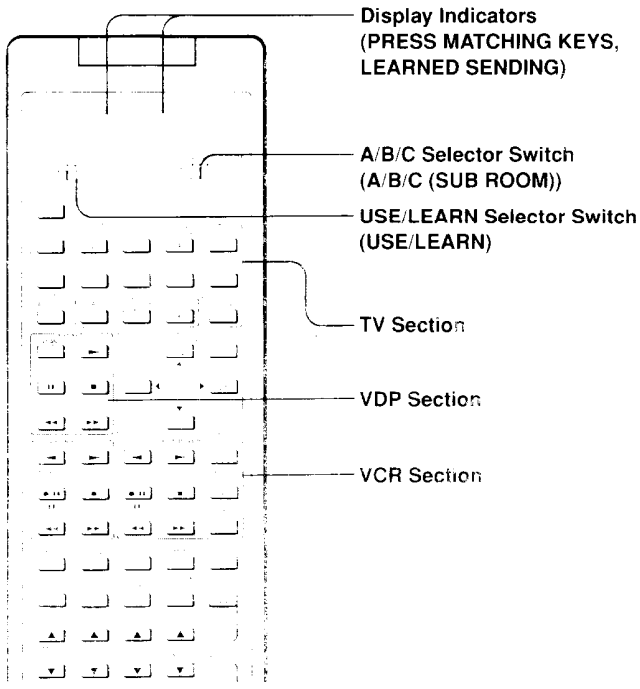
Universal Programmable Remote Control Transmitter RC-230M

This is a remote control transmitter which uses high-level computer technology to provide programming functions.
If you are using a product mode by another company which has a remote control transmitter, you can memorize the codes of that product into the RC-230M. If you are using an ONKYO Compact Disc Player, Cassette Tape Deck, Digital Audio Tape Deck or turntable that has the MR mark, there is no need to memorize the codes of its remote control transmitter into the RC-230M. All of your remote control needs can be satisfied using the RC-230M alone.

NOTES:

- Commands of systems with the RI ONKYO mark are already stored at the A, B and C (SUB ROOM) position of the A/B/C Selector switch. There is no need to "learn" them. (The RI mark is ONKYO's own mark.)
- If necessary, each of the A or B keys can be placed in the memory with a different code. They cannot be placed in memory when to C (SUB ROOM) position.
- The output of most infrared remote control transmission units on the market today consists of a series of pulses (codes). By changing these codes, functions can be differentiated between products of different manufacturers. In order to operate certain functions, the codes of that particular unit have to be assigned the same code for the function to work correctly.

Displays and switches



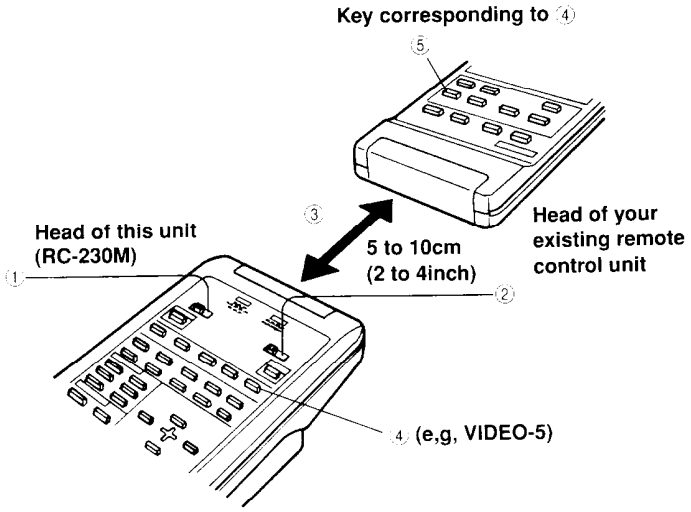
■ **Display indicators (PRESS MATCHING KEYS, LEARNED/SENDING)**
These indicators act as guides when this unit "learns" and "uses" commands. They also warn the user when an error is made or when battery power is low.

■ The VIDEO section is partially indicated by blue characters and consists of the following functions.

For TV:	Numeric keypad 1–9, 0, +10 CH (–,+)
For VDP:	POWER (POWER), Assign the other keys to the same section as the white characters on the CD.
For VCR:	POWER (POWER), PAUSE (❚❚) TV/VCR, CH Assign the other keys to the same section as the white characters on the tape deck.

- The RC-230M can also store remote control codes at A and B keys that are not indicated by characters or symbols.
- Be sure to assign functions to the keys with the corresponding function names and/or symbols. If functions and key names are different, the function which actually operates will be different from that which is displayed.
  For instructions regarding the operation of "learned" units, please refer to the individual instruction manuals for each product.
- Even after codes have been memorized, please keep your existing remote control transmitter in a safe place. If the memorized codes are lost when the batteries run down , etc., it will be necessary to memorize them once again using the existing remote control transmitter.

How to learn

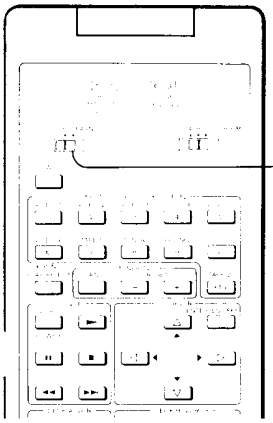


① Set the USE/LEARN Selector switch to LEARN.
② Select A or B from A/B/C (SUB ROOM) Selector switch.
③ Place the head of your existing remote control unit 2-4 inches (5-10 cm) from the head of this unit, laying both units on a table or another flat surface.
④ Press the key of this unit into which you want to memorize the code. The "PRESS MATCHING KEYS" indicator lights.
⑤ Hold down the key you want to memorize on your existing remote control unit while the "PRESS MATCHING KEYS"indicator is ligted, until the " LEARNED" indicator lights.
⑥ To continue the process and memorize another key, repeat steps ④ - ⑤ .

NOTES:

- Some remote controllers use a single key to change codes, with the code changing each time the key is pressed. If you are using this kind of controller, please perform "learn" functions for each of the keys individually, one function to one RC-230M key.
- **This remote control transmitter uses infrared rays. Most remote control codes can be memorized using the infrared system; however, depending on the degree to which the system differs, there are some rare occasions where memorization is not possible.**

Operation



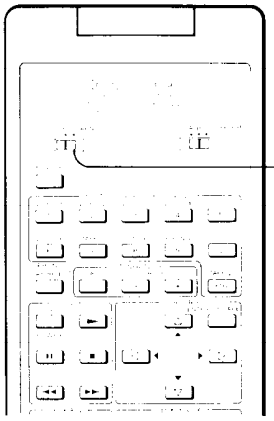
① Set the USE/LEARN Selector switch to USE
② Set the A/B/C (SUB ROOM) Selector switch to the desired position. Then operate the remote control unit by pressing the keys of the functions you want to use.

- There is no power switch on the remote control transmitter. Power is supplied automatically when a key is pressed. If no key is pressed for a short interval, power goes off automatically, to avoid wasting the battery.
- If you press a key at which no code has been memorized, the "LEARNED/SENDING" indicator will not light up.

NOTE:

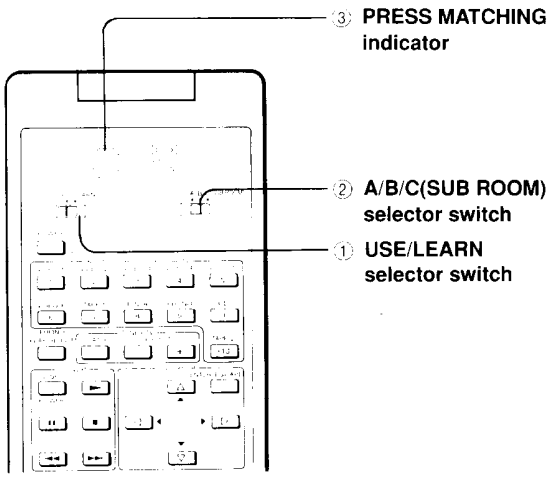
Please check whether previously-memorized functions are working properly. The SENDING indicator may not be illuminated with your existing remote control unit.

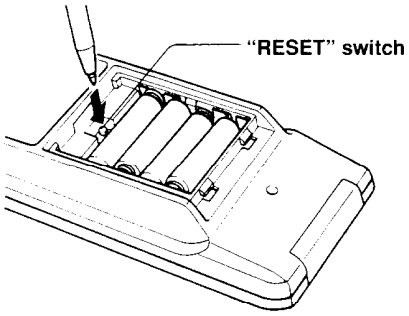
Changing commands



① Set the USE/LEARN Selector switch to LEARN.
② Commands should be memorized using the method outlined in the section "How to learn". New codes of newly entered buttons only are modified and the codes of previously memorized buttons are not modified.

How to reset the RC-230M (Clearing memorized commands)





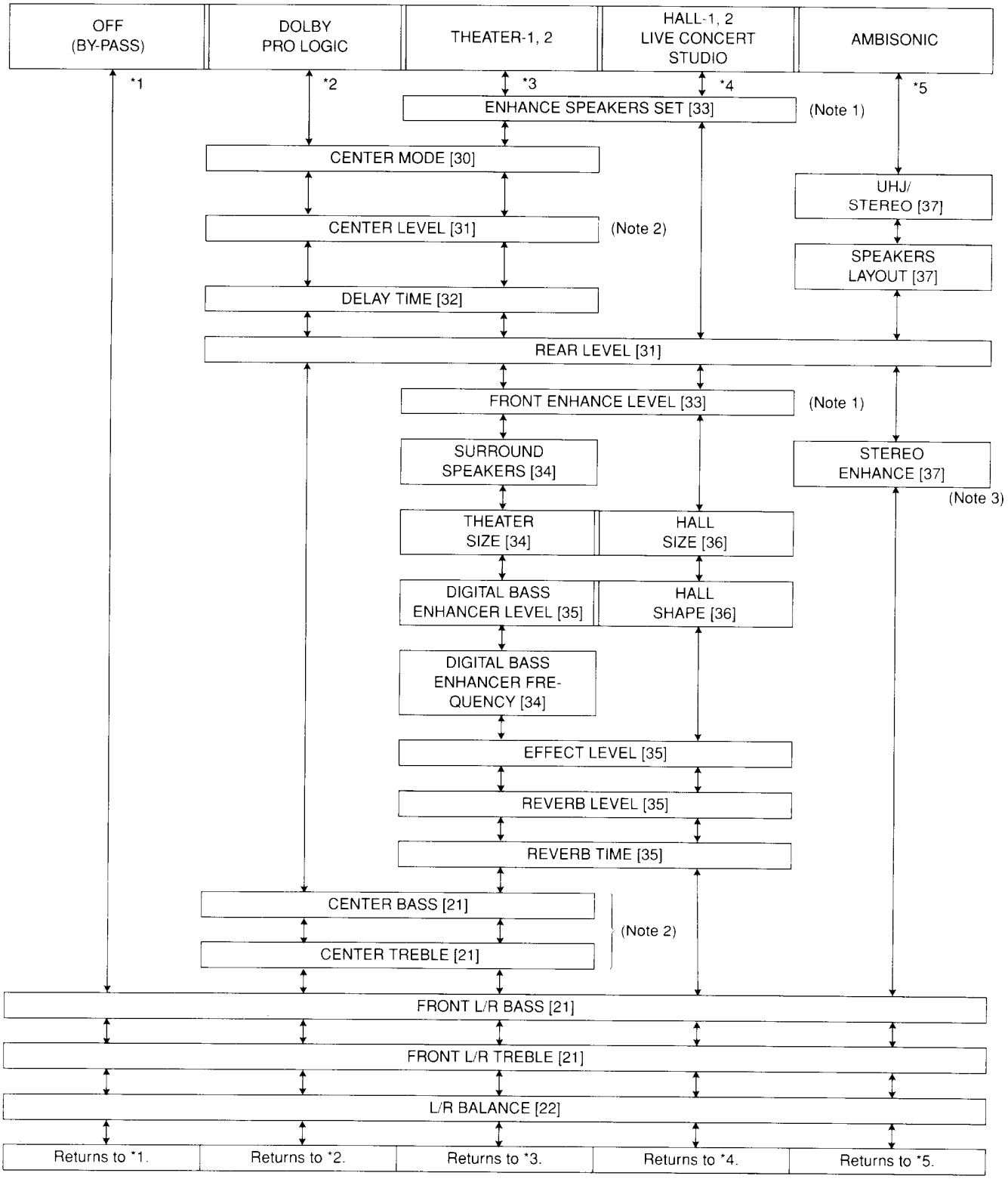
If the Indicators flash

- During learning, the indicators flash when the same codes are stable and cannot be memorized multiple times. To ensure the reception of stable codes, place both remote control units on a table or other level surface and position them at a fixed distance and orientation.
- The indicators may flash in case an audio device can be controlled by the existing remote control unit but the codes cannot be memorized by the RC-230M. This is because the RC-230M requires highly stable transmission output for identifying codes. Replace the batteries of the existing remote control unit with new ones, then repeat the learning operation.
- If the indicators flash when a key is pressed, it means that the RC-230M batteries are worn out. Replace its batteries with new ones.

① Set the USE/LEARN Selector switch to LEARN.
② Switch A/B/C (SUB ROOM) Selector switch to A or B you want to reset.
③ Press the key you want to delete to light up PRESS MATCHING KEYS indicator.
④ Remove the battery compartment cover.
⑤ Use the tip of a pointed instrument,such as a ball-point pen,to press the Reset switch (indicated by the "RESET" in the battery case), then release the switch when the "PRESS MATCHING KEYS" indicator goes out. The reset operation is completed.
⑥ Attach the battery compartmento cover again.
⑦ When the key is reset,the preset ONKYO codes will be recalled.
- Repeat step ③ to ⑤ to reset other keys if desired.

Parameter selector

This chart shows how the display changes when the parameter selector button is pressed. Pressing ◁ Parameter selector button goes to the upper items and pressing ▷ button goes to the lower items. Pressing the parameter controller button in each display can change the value and condition. The numbers in the parentheses refer to page numbers in which detailed instructions for the adjustment method are given.



(Note 1) This item is not available when Multi Source is on.
(Note 2) This item is not available when Center mode is set to Phantom.
(Note 3) This item is not available when AMBISONIC SOURCE mode is UHJ.

Trouble shooting guide

NOTE:

If a problem occurs, first operate the unit using the front panel controls to confirm that it is not due to a malfunction (or worn out batteries) of the remote control transmitter.

Trouble	Cause	Remedy
No power.	• Power cord is disconnected. • There is external noise in the computer circuits of the TX-SV909PRO. • AC fuse blown.	• Connect power cord. • Turn the power button off and then on again or remove the AC plug from the outlet. • Contact your ONKYO service center.
Power but no sound.	• Tape monitor switch on. • Audio muting switch on. • Bad connections. • Amplifier protection circuitry has been activated.	• Switch to off. • Switch to off by remote control transmitter. • Check input leads, speaker leads, pin plugs, etc. • Contact your ONKYO service center.
No sound from the center speaker, or very minimal sound.	• Speaker cord is removed. • Surround mode is set to other than DOLBY PRO LOGIC or THEATER-1, 2. • Center level is set to the minimum. • When Surround mode is set to DOLBY PRO LOGIC or THEATER-1, 2, Center mode is set to "PHANTOM". • Even though there is only one center speaker, it is connected to DUAL side.	• Check the connection between the amplifier and the speaker. • Some Surround modes do not use a center speaker. • Set the center level to the appropriate volume . • Set Center mode to "NORMAL" or "WIDEBAND". • Connect it to SINGLE of the speaker terminal.
Hum, low-frequency noise.	• Poor or no input ground. • Poor or no phono motor ground. • The placement of the input/output cable on the rear panel is not correctly adjusted.	• Check outer conductor of input plugs. • Check for proper ground connection. • Adjust the placement of the cable to reduce hum.
Howling when the volume is turned up.	• Turntable and speakers are too close together.	• Move them farther apart.
Rough or scratchy sound. High range is not clear.	• Stylus of pick-up is worn. • Stylus tip is dirty. • Treble control too high.	• Replace. • Clean. • Turn treble control down.
AM stations cannot be received.	• AM loop antenna is not attached.	• Connect the included AM loop antenna to the AM antenna terminals.
Buzzing noise on AM (particularly conspicuous at night or with weak stations).	• Noise from electrical apparatus such as fluorescent lamp.	• Move AM loop antenna to different position. • Set up outdoor AM antenna.
High-pitched noise or buzzing noise on TV.	• Noise from TV set.	• Place the AM loop antenna as far as possible from the TV. • Move unit away from TV set.
Crackling noise on AM, FM.	• Noise caused by turning fluorescent lamp on and off. • Noise from automobile ignition.	• Move antenna as far as possible from the fluorescent lamp. • Install an FM outdoor antenna as far as possible from the road. • Change the position or direction of the outdoor antenna.
FM tuned and stereo indicators light but sound is distorted and stereo separation is bad.	• Station is too strong. • Multiple reflection of the radio waves because of tall buildings or mountains.	• Change to T-shaped antenna. • Use antenna which has better directivity and select a point where the distortion is least.
FM tuned Indicators and stereo indicator flicker and hiss is heard on FM.	• Station is too weak. • Stereo FM broadcasts cover only about half the distance of an ordinary broadcast.	• Install an outdoor FM antenna. • Change the position or direction of the outdoor antenna.
No station is recalled when a preset key is pressed.	• The power cord has been unplugged for a long time.	• The memory contents are lost. Store all stations again.
The multiple room remote system does not operate.	• Connection is wrong. • The MR OFF button on the TX-SV909PRO is engaged. (The MR OFF indicator will light.)	• Check the connection again. • Press the MR OFF button. (The MR OFF indicator will be turned OFF.)
Front panel controls function but remote control transmitter does not.	• No batteries in remote control transmitter. • Batteries have worn out.	• Insert batteries. • Replace batteries.
Also refer to the respective instruction manuals of the Video Disc Player, video cassette recorder, TV monitor, etc., being used.		

The tuning steps by which the tuned frequency changes on each band have been set at the factory to the proper value for the country where each unit is to be sold. If you use the unit in a country where a different tuning step is required or if the broadcast frequencies in your country change so that you can not tune in radio stations precisely, contact your authorized ONKYO Service Center.

This device employs a microcomputer to perform various functions and operations. If interference generated by an external power supply, radio waves, or other electrical source results in an accident which causes the specified operations and functions to operate abnormally, to perform a reset please follow the procedure below.

1. Press the CD Input Selector button.
2. Press and hold down the CD button, then press the POWER button.
3. "INITIALIZE" is displayed on the display for approximately 5 seconds.
4. Unplug the power cord from the AC outlet while "INITIALIZE" is displayed.
5. Preset memory and parameters stored in memory, such as surround are initialized.

About the remote control transmitter RC-230M

If the remote control transmitter does not operate,	• First, try operations using the buttons of the main unit for each function. If operation is not possible, the fault is in the main unit and not the remote control transmitter. • If the batteries are weak, replace the batteries.
The keys of this remote control unit cannot be memorized or some remote control unit functions cannot be memorized.	• This remote control transmitter uses an infrared ray system and most functions can be memorized. However, there may some instances where memorization is not possible or some remote control unit functions cannot be memorized due to the output method.
It is difficult to memorize using the keys of this remote control transmitter, and even when a function has been memorized, operation is incorrect.	• This remote control transmitter is not aimed directly at your existing remote control unit, or the distance between the two units is out of range. Confirm that these two factors are corrected. • Confirm whether the batteries of your existing remote control transmitter are weak. (If the batteries are weak, it may be impossible to operate a function or to memorize functions. Insert new batteries and try again.)
The functions of the television, video, etc., memorized into this remote control transmitter do not operate properly with the keys.	• Make sure the functions memorized correspond to the characters or marks on the keys. Functions will operate as memorized, without relation to the characters or marks on the keys. • If the batteries are weak, it may be impossible to memorize functions. Insert the indicated type of batteries into your existing remote control unit and into this remote control transmitter, and try memorizing the code once again. (Make sure the new batteries are the correct type indicated for the equipment.)
If the operable distance of this remote control transmitter is shorter than that of the existing remote control unit, or if the reaction time of the machine is slow when using this remote control transmitter.	• The operable distance of this remote control transmitter and your existing remote control unit are different. In this case, it may happen that the operable distance is shortened. • Try memorizing once again, making sure you are memorizing at an appropriate distance. • Check that the batteries are not weak. • It may be simply that the correspondence between the unit and machine is slow.
The codes memorized by the keys of this remote control transmitter have been "forgotten".	• If the batteries are taken out of the unit for more than one hour, memorized codes will be lost. In this case, please memorize the codes once again.

Specifications

AMPLIFIER SECTION

Power output: Stereo mode
Front L/R channels
110 watts per channel in. RMS. at 8 ohms, both channels driven, from 20Hz to 20,000Hz, with no more than 0.04% total harmonic distortion.
Surround mode
Center channel
110 watts min. RMS. at 8 ohms 1,000Hz, with no more than 0.08% total harmonic distortion.
Rear channels, Front Enhance/ Remote channels.
30 watts per channel min. RMS. at 8 ohms 1,000Hz with no more than 0.08% total harmonic distortion.

IM distortion:	0.04% at rated power (FRONT)
Damping factor:	70 at 8 ohms (FRONT)
Sensitivity and impedance:	Phono: 2.5mV/50 kohms CD/Tape Play: 150mV/50 kohms Tape Rec: 150mV/2.2 kohms Pre out (FRONT): 1V, 2.2 kohms (REAR/CENTER/FRONT ENHANCE): 1V, 2.2 kohms Mono out (SUB WOOFER): 1V, 2.2 kohms
Phono overload:	120mV RMS. at 1,000 Hz, 0.5 % THD.
Frequency response:	20 to 30,000 Hz, +/–1 dB VIDEO IN → DOLBY PRO LOGIC SURROUND → REAR PRE OUT : 30 to 7 kHz, +0 dB, –3 dB
RIAA deviation:	20 to 20,000 Hz, +/–0.8 dB
Tone control:	BASS: +/–10 dB at 100 Hz
(Front L/R, center)	TREBLE: +/–10 dB at 10,000 Hz
Signal-to-Noise ratio:	PHONO: 80 dB (IHF A, 5mV input)
(SURROUND MODE: OFF)	CD/TAPE: 100 dB (IHF A)
Muting:	–∞dB

VIDEO SECTION

Sensitivity and Impedance:

VIDEO 1 – 6 (IN) VIDEO
input: 1Vp-p, 75 ohms
VIDEO 1 – 3 (OUT), MONITOR OUT VIDEO
output: 1 Vp-p, 75 ohms
input: Y signal 1 Vp-p,75 ohms
C signal 0.28 Vp-p, 75 ohms
VIDEO1 – 3 (OUT), MONITOR OUT S-VIDEO
output: Y signal 1 Vp-p, 75 ohms
C signal 0.28 Vp-p, 75 ohms

TUNER SECTION FM:

Tuning range:	87.50 – 108.00 MHz (50 kHz steps)
Usable sensitivity:	Mono: 11.2 dBf, 1.0 μV (75 ohms)
	Stereo: 17.2 dBf, 2.0 μV (75 ohms)
50 dB quieting sensitivity:	Mono: 17.2 dBf, 2.0 μV (75 ohms)
	Stereo: 37.2 dBf, 20 μV (75 ohms)
Capture ratio:	1.5 dB
Image rejection ratio:	80 dB
IF rejection ratio:	90 dB
Signal-to-Noise ratio:	Mono: 76 dB
	Stereo: 70 dB
Alternate channel Attenuation:	55 dB
AM suppression ratio:	50 dB
Harmonic distortion:	Mono: 0.1%
	Stereo: 0.2%
Frequency response:	30 – 15,000 Hz ± 1.0 dB
Stereo separation:	45 dB at 1kHz
	30 dB at 100 – 10,000 Hz
Muting level:	17.2 dBf

AM:

Tuning:	USA and Canadian models 530 – 1710 kHz
	Other area models 522 – 1611 kHz
Usable sensitivity:	30 μV
Image rejection ratio:	40 dB
IF rejection ratio:	40 dB
Signal-to-Noise ratio:	40 dB
Harmonic distortion:	0.7%

GENERAL

Power supply:	USA and Canadian models AC120V, 60 Hz
	Other area models AC 220V,50 Hz
Dimensions (W x H x D):	455 x 190 x 425 mm 17-15/16 " x 7-7/16" x 16-11/16"
Weight:	22 kg., 48.5 lbs.

REMOTE CONTROL TRANSMITTER RC-230M

Transmitter:	Infrared
Signal range:	Approx. 5 meters (16ft.4")
Power supply:	Four "AA" batteries (1.5V x 4)

Specifications and features are subject to change without notice.

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SN 29341728 A

09-44-1K-ASA

Printed in Japan